Vol. II

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1935

No. 636

JAMES WALTER CARTER, PETITIONER,

vs.

CARTER COAL COMPANY, GEORGE L. CARTER, AS VICE-PRESIDENT AND A DIRECTOR OF SAID COMPANY, ET AL.

No. 651

GUY T. HELVERING ET AL., PETITIONERS,

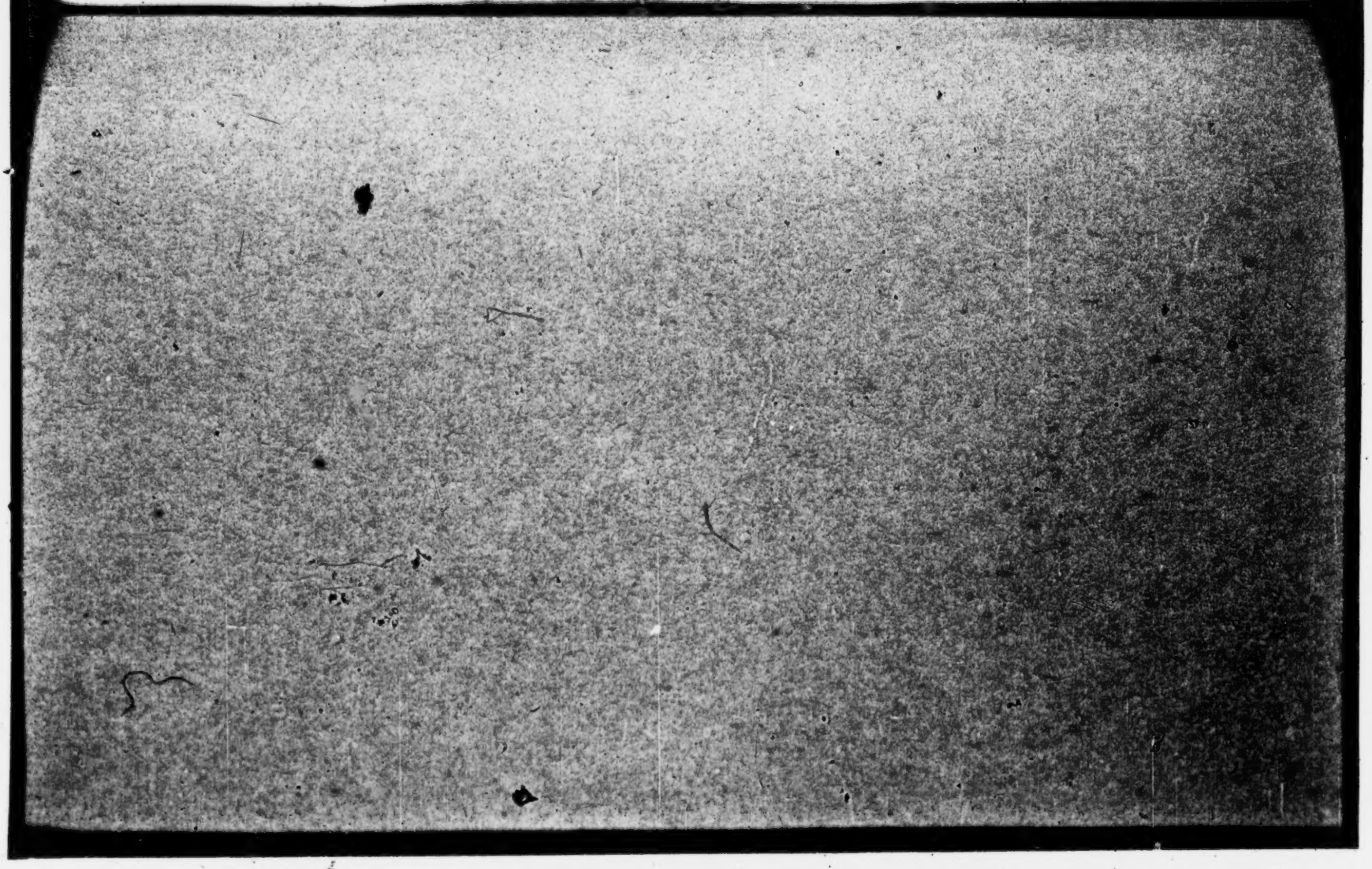
vs.

JAMES WALTER CARTER ET AL.

ON WRITS OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA

PETITIONS FOR CERTIORARI FILED DECEMBER 16, 1935.

CERTIORARI GRANTED DECEMBER 20, 1935,
DECEMBER 23, 1935.



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VOL. II.

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Article IX

Amendments

These By-Laws, or any of them, may be altered, amended or repealed or new By-Laws may be made by the stock- [fol. 841] holders or, at any meeting of the Board of Directors, by vote of a majority of the whole Board of Directors, provided that the proposed action in respect thereof shall be stated in the notice of such meeting. By-Laws made, altered or amended by the Board of Directors shall be subject to alteration, amendment or repeal by the stockholders.

[fol. 842] Pl'ff's Ex. 5

James Walter Carter

Stevenson, Maryland

New York, N. Y., August 30th, 1935.

To Carter Coal Company and the Board of Directors thereof:

It is my opinion, based upon advice of counsel, that the Bituminous Coal Conservation Act of 1935 and particularly the sections thereof which purport to regulate the conduct of the business of this Company and those which are designed to coerce this Company into acceptance of the Bituminous Coal Code provided for in that Act, are unconstitutional and void and cannot lawfully be enforced as against Carter Coal Company; that acceptance of the said Code and compliance therewith by Carter Coal Company would deprive the Company and its stockholders of their constitutional and property rights and would constitute a surrender of the most vital functions of the Company and its directors in the management of the business of the said Company and would be ultra vires; and that the payment of the so-called taxes provided in the said Act would constitute a waste and misappropriation of the assets of the Company.

It is also my opinion that acceptance of the said Code would be detrimental to the interests of the Company, would increase the costs of the Company and the selling prices of

the coal produced by it, which would result in a loss of customers to competitors, and destruction of the business of the Company.

As President of the Company I suggest, and as a shareholder therein I demand, that the Company and its Directors shall refrain from complying with the Act, shall refrain from becoming a member of the Code provided for therein, and shall refuse to pay the taxes imposed thereby.

I further suggest and demand that the Company and its Directors shall contest the constitutionality of said Act and prevent an unconstitutional and improper diversion of the assets of the Company in the payment of the taxes provided by said Act, and that the Company shall apply to a court of competent jurisdiction to determine the liability of the Company under said Act, and take such steps as shall be necessary to protect the rights of the Company and its shareholders.

James Walter Carter.

JWC:AP.

[fol. 843] PL'FF's Ex. 6

Carter Coal Company

The undersigned, C. A. Hall, hereby certifies that he is Secretary of Carter Coal Company, a Delaware corporation, and that the copy of minutes attached hereto is a true and correct conformed copy of the minutes of a special meeting of the Board of Directors of said Corporation, held on Friday, August 30, 1935, that a quorum was present and acted throughout at said meeting, and that the resolutions set forth in said minutes were duly adopted by a majority of the directors of the Corporation.

Dated October 21, 1935.

C. A. Hall, Secretary. (Corporate Seal.)

[fol. 844] Minutes of Special Meeting of the Board of Directors of Carter Coal Company, a Delaware corporation, held at the office of the Corporation, No. 230 Park Avenue, New York, N. Y., at four o'clock P. M. (Daylight Saving Time), on Friday, August 30, 1935, pursuant to waiver of notice.

The following directors were present: Messrs. James W. Carter, George L. Carter, and C. A. Hall, constituting all of the directors of the Corporation.

Mr. James W. Carter, the President of the Corporation, presided and Mr. C. A. Hall, the Secretary of the Corporation, acted as secretary and kept the minutes.

The Chairman reported that a waiver of notice and consent to the holding of the meeting had been obtained from all of the directors in accordance with the By-laws of the Corporation and directed that said consent and waiver be annexed to the minutes of the meeting. A copy thereof is as follows:

[fol. 845] "Carter Coal Company

"Consent and Waiver of Notice of Special Meeting of Board of Directors

"We, the undersigned, being all the directors of Carter Coal Company, a Delaware corporation, do hereby waive notice of the time, place and purposes of a Special Meeting of the Board of Directors of said Corporation, and do hereby consent that said Special Meeting be held at four o'clock in the afternoon on August 30, 1935, at No. 230 Park Avenue, New York, N. Y., for the following purposes:

"(1) to consider and take action with respect to the policy to be pursued by the Corporation in connection with the Bituminous Coal Conservation Act of 1935 and the code provided for therein; and

"(2) for the transaction of such other business as may come before the meeting.

"Dated New York, N. Y., August 30, 1935.

Geo. L. Carter, James Walter Carter, C. A. Hall."

The Chairman stated that the Bituminous Coal Conservation Act of 1935 had been signed by the President of the United States and was therefore effective and further stated that the meeting had been called for the purpose of considering the policy to be adopted by the Corporation and the steps to be taken by the Corporation in connection with said Act and the code provided for thereunder, and that these were matters of vital interest to the Corporation.

[fol. 846] He then submitted and read to the meeting the following demand:

"August 30, 1935.

"To Carter Coal Company and the Board of Directors thereof:

"It is my opinion, based upon advice of counsel, that the Bituminous Coal Conservation Act of 1935 and particularly the sections thereof which purport to regulate the conduct of the business of this Company and those which are designed to coerce this Company into acceptance of the Bituminous Coal Code provided for in that Act, are unconstitutional and void and cannot lawfully be enforced as against Carter Coal Company; that acceptance of the said Code and compliance therewith by Carter Coal Company would deprive the Company and its stockholders of their constitutional and property rights and would constitute a surrender of the most vital functions of the Company and its directors in the management of the business of the said Company and would be ultra vires; and that the payment of the so-called taxes provided in the said Act would constitute a waste and misappropriation of the assets of the Company.

"It is also my opinion that acceptance of the said Code would be detrimental to the interests of the Company, would increase the costs of the Company and the selling prices of the coal produced by it, which would result in a loss of customers to competitors, and destruction of the business of the Company.

"As President of the Company I suggest, and as a shareholder therein I demand, that the Company and its Directors shall refrain from complying with the Act, shall refrain from becoming a member of the Code provided for therein, and shall refuse to pay the taxes imposed thereby.

"I further suggest and demand that the Company and its Directors shall contest the constitutionality of said Act and prevent an unconstitutional and improper diversion of [fol. 847] the assets of the Company in the payment of the taxes provided by said Act, and that the Company shall apply to a court of competent jurisdiction to determine the liability of the Company under said Act, and take such steps as shall be necessary to protect the rights of the Company and its shareholders.

(Signed) James Walter Carter."

Mr. George L. Carter then stated that he agreed that the Bituminous Coal Conservation Act was unconstitutional and in addition was unsound in its economic aspects but he pointed out, however, that if the Corporation should not join the code it would be subjected under the Act to a 15% tax on the sales price of all coal produced and sold by the Corporation, the payment of which penalty would ultimately ruin the Corporation financially and bring it to bankruptcy. He said that he did not think that the Corporation could afford to take such a risk in the event that the courts should rule that the Act was constitutional, so that the only alternative open to the Corporation was to accept membership in the code provided for in the Act and comply with said code even though such compliance would be as a business matter to the adverse interests of the Corporation.

Mr. Hall stated that he concurred in the views expressed by Mr. George L. Carter and that he felt that the Corporation must adopt a conservative course and could not take [fol. 848] the risk of staying out of the code and allowing taxes and penalties to accrue during the period it would necessarily take to contest the constitutionality of the Act in the courts.

Thereupon, after discussion, upon motion duly made and seconded, the following resolution was adopted by majority of the members of the Board (Mr. James W. Carter voting in the negative):

Whereas it is the unanimous opinion of the Members of this Board that the Bituminous Coal Conservation Act of 1935, approved August 30, 1935, is unconstitutional and is economically unsound, and that it would adversely affect the business of this Company and the interests of its shareholders for this Company to accept and obligate itself to comply with the Code provided for therein; and

Whereas it is nevertheless the opinion of a majority of this Board that the Company must accept the Code provided for by said Act, because the extreme penalty for failure to accept the same, in the form of a 15% tax on its gross sales, would result in serious damage to the Company and might result in its bankruptcy;

Resolved that the Company shall accept the Code provided for in said Act, and that the proper officers of the

Company are hereby authorized and directed to take all action which may be necessary in the premises.

The Chairman then stated that he intended to exercise his prerogative under the By-laws of the Corporation of calling a special meeting of the stockholders to consider and take action with respect to the resolution which had been adopted by a majority of the directors over his dissent. [fol. 849] There being no further business to come before the meeting, it was, on motion duly made and seconded, adjourned.

C. A. Hall, Secretary.

[fol. 850] PL'FF'S EX. 7

Carter Coal Company

The undersigned, C. A. Hall, hereby certifies that he is Secretary of Carter Coal Company, a Delaware corporation, and that the copy of minutes attached hereto is a true and correct conformed copy of the minutes of a special meeting of the stockholders of said Corporation, held on Friday, August 30, 1935, that a quorum was present and acted throughout at said meeting, and that the resolutions set forth in said minutes were duly adopted by a majority in interest of the voting stockholders of the Corporation.

Dated, October 21, 1935.

C. A. Hall, Secretary. (Corporate Seal.)

[fol. 851] Minutes of Special Meeting of Stockholders of Carter Coal Company, a Delaware corporation, held at the office of the Corporation, No. 230 Park Avenue, New York, N. Y., at five o'clock P. M. (Daylight Saving Time), on Friday, August 30, 1935, pursuant to waiver of notice.

Mr. James W. Carter, the President of the Corporation, acted as Chairman of the meeting and called the meeting to order. Mr. C. A. Hall, the Secretary of the Corporation, acted as secretary of the meeting.

The Chairman instructed the Secretary to take the names of the stockholders who were present in person or by proxy and to ascertain and report to the meeting the number of shares of stock of the Corporation, the holders of which

were present in person or by proxy and entitled to vote at the meeting.

The Secretary, having taken the names of the stockholders present in person and by proxy, reported that there were present at the meeting in person or represented by proxy the holders of record of 30,000 shares of the Class [fol. 852] A Common Stock of the Corporation (being all of the outstanding shares thereof) and 34,187 shares of the Preferred Stock of the Corporation (being all of the outstanding shares thereof) and he submitted a list of the holders of such stock of the Corporation present in person or represented by proxy and entitled to vote thereat and the number of shares held by each.

The names on such list were as follows:

Stockholders Present in Person

Name	Number of Class A Common Shares	Number of Preferred Shares
James W. Carter	15,000	9,733
Margaret Woolfolk Carter	None	5,100
George L. Carter	15,000	9,948

Stockholders Present by Proxy

Name	Number of Class A Common Shares	Number of Preferred Shares
Mayetta W. Carter	None	9,406

The Chairman thereupon announced that a quorum was present.

The Chairman then stated that a consent to the holding of the meeting and waiver of notice thereof had been ob- [fol. 853] tained from all of the stockholders of record of the Corporation entitled to vote at the meeting and directed that said consent and waiver of notice be annexed to the minutes of the meeting. A copy thereof is as follows:

"Carter Coal Company

"Consent and Waiver of Notice of Special Meeting of Stockholders

"The undersigned, stockholders of Carter Coal Company, a Delaware corporation, do hereby waive notice of

the time, place and purposes of a Special Meeting of the stockholders of said Corporation, and do hereby consent that said Special Meeting be held at five o'clock in the afternoon on August 30, 1935, at No. 230 Park Avenue, New York, N. Y., for the following purposes:

"(1) to consider and take action with respect to the policy to be pursued by the Corporation and the action to be taken by the Corporation in connection with the Bituminous Coal Conservation Act of 1935 and the code provided for therein; and

"(2) for the transaction of such other business as may come before the meeting.

"Dated New York, N. Y., August 30, 1935.

Geo. L. Carter, Mayetta W. Carter, by Geo. L. Carter, Atty. in Fact. Margaret Woolfolk Carter. James Walter Carter."

[fol. 854] The Chairman then stated that the Bituminous Coal Conservation Act of 1935 had been signed by the President of the United States and had thereby become law and that the Corporation was affected in important aspects by said Act and the code provided for therein. He then stated that there had previously been held on the same day a special meeting of the Board of Directors of the Corporation and that at said meeting he had submitted a demand, which he then read to the meeting, and a copy of which is as follows:

"August 30, 1935.

"To Carter Coal Company and the Board of Directors thereof:

"It is my opinion, based upon advice of counsel, that the Bituminous Coal Conservation Act of 1935 and particularly the sections thereof which purport to regulate the conduct of the business of this Company and those which are designed to coerce this Company into acceptance of the Bituminous Coal Code provided for in that Act, are unconstitutional and void and cannot lawfully be enforced as against Carter Coal Company; that acceptance of the said Code and compliance therewith by Carter Coal Company would deprive the Company and its stockholders of their

constitutional and property rights and would constitute a surrender of the most vital functions of the Company and its directors in the management of the business of the said Company and would be ultra vires; and that the payment of the so-called taxes provided in the said Act would constitute a waste and misappropriation of the assets of the Company.

"It is also my opinion that acceptance of the said Code would be detrimental to the interests of the Company, would increase the costs of the Company and the selling [fol. 855] prices of the coal produced by it, which would result in a loss of customers to competitors, and destruction of the business of the Company.

"As President of the Company I suggest, and as a shareholder therein I demand, that the Company and its Directors shall refrain from complying with the Act, shall refrain from becoming a member of the Code provided for therein, and shall refuse to pay the taxes imposed thereby.

"I further suggest and demand that the Company and its directors shall contest the constitutionality of said Act and prevent an unconstitutional and improper diversion of the assets of the Company in the payment of the taxes provided by said Act, and that the Company shall apply to a court of competent jurisdiction to determine the liability of the Company under said Act, and take such steps as shall be necessary to protect the rights of the Company and its shareholders.

(Signed) James Walter Carter."

He further stated that at said directors' meeting a majority of the directors had adopted, over his dissent, the following resolution:

"Whereas it is the unanimous opinion of the Members of this Board that the Bituminous Coal Conservation Act of 1935, approved August 30, 1935, is unconstitutional and is economically unsound, and that it would adversely affect the business of this Company and the interests of its shareholders for this Company to accept and obligate itself to comply with the Code provided for therein; and

"Whereas it is nevertheless the opinion of a majority of this Board that the Company must accept the Code provided for by said Act, because the extreme penalty for

failure to accept the same, in the form of a 15% tax on its gross sales, would result in serious damage to the Company and might result in its bankruptcy;

"Resolved that the Company shall accept the Code provided for in said Act, and that the proper officers of the Company are hereby authorized and directed to take all action which may be necessary in the premises."

[fol. 856] He then stated that in his opinion the action authorized by the directors would adversely affect the interests of the Corporation. He said that he had been advised by counsel that the Act was unconstitutional in so far as it purported to affect the Corporation and further stated that he was of the opinion that aside from the question of the constitutionality of the Act it was economically unsound and consequently the Corporation should refuse to join the code provided for in the Act, refuse to pay the taxes provided for therein to be assessed against non-code members, and take whatever steps might be necessary to contest in the courts the constitutionality of the Act.

Mr. George L. Carter then stated that the decision of the majority of the directors taken at the special meeting aforesaid had been carefully considered, that while he agreed that the Act seemed to him to be unconstitutional and that the Corporation would be adversely affected as a business matter by compliance with the code provided for in the Act, he did not believe that the Corporation could afford to take the risk of an adverse decision by the courts. He pointed out that under the Act any producer failing to join the code was subject to the imposition of a so-called "tax" of 15% upon the sales price of all coal produced and sold by the Corporation and that if the Corporation should [fol. 857] find itself in a position where it would be compelled to pay such a tax for any appreciable length of time, plus any penalties which might be imposed for refusal to pay the tax when assessed, the Corporation would be faced by financial ruin, so that the only alternative open to the Corporation seemed to him to be the acceptance of the code and compliance therewith.

Thereupon, after discussion, on motion duly made and seconded, the following resolution was adopted by a majority in interest of the voting stockholders of the Corporation:

Whereas this meeting has considered a demand addressed to the Company by its President and a preamble and resolution of the Board of Directors adopted on August 30, 1935, upon consideration of said demand;

Whereas a majority in interest of the holders of voting shares of this Company fully agrees with all of the conclusions set forth in said preamble and resolution of the Board of Directors; and

Whereas if the Company does not assent to the Code the exaction of the tax imposed by the Bituminous Coal Conservation Act of 1935 would ruin the Company financially and probably result in its bankruptcy;

Be it resolved that the said resolution of the Board of Directors of this Company, adopted on August 30, 1935, be and it hereby is in all respects approved, ratified and confirmed.

The Secretary reported that the vote upon said resolution had been as follows:

[fol. 858] For the Resolution

Name	Number of Class A common shares	Number of preferred shares
George L. Carter	15,000	9,948
Mayetta W. Carter		9,406

Against the Resolution

Name	Number of Class A common shares	Number of preferred shares
James W. Carter	15,000	9,733
Margaret Woolfolk Carter		5,100

There being no further business to come before the meeting, it was, on motion duly made and seconded, adjourned.

C. A. Hall, Secretary.

[fol. 859] Laws of Delaware, 1929, Chapter 135, Section 4

"Board of Directors; Qualifications, Powers; Classes; Committees of Directors:—The business of every corporation organized under the provisions of this Chapter shall be managed by a Board of Directors, except as hereinafter

or in its Certificate of Incorporation otherwise provided. The number of directors which shall constitute the whole board shall be such as from time to time shall be fixed by, or in the manner provided in, the by-laws, but in no case shall the number be less than three. Directors need not be stockholders unless so required by the Certificate of Incorporation or the by-laws. The Directors shall hold office until their successors are respectively elected and qualified, and a majority of them shall constitute a quorum for the transaction of business, unless the by-laws shall provide that a different number shall constitute a quorum, which in no case shall be less than one-third of the total number of directors nor less than two directors. The Board of Directors may(by resolution or resolutions, passed by a majority of the whole board, designate one or more committees, each committee to consist of two or more of the directors of the corporation, which to the extent provided in said resolution or resolutions or in the by-laws of the corporation, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of the corporation, and may have power to authorize the seal of the corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be stated in the by-laws of the corporation or as may be determined from time to time by resolution adopted by the Board of Directors. The directors of any corporation organized as aforesaid may, by the Certificate of Incorporation or any amendment thereto, or by a vote of the stockholders, be divided into one, two or three classes; the term of office of those of the first class to expire at the annual meeting next ensuing; of the second class one year thereafter; of the third class two years thereafter, and at each annual election held after such classification and election, directors shall be chosen for a full term, as the case may be, to succeed those whose terms expire. But the provisions of this Section shall not apply to corporations not for profit, for which it is desired to have no capital stock; and the business of every such corporation organized under the provisions of this Chapter shall be managed as provided in its Certificate of Incorporation. (as amend., Laws of Delaware, 1929, ch. 135, Sec. 4.)"

MINING LAWS

OF THE

STATE OF WEST VIRGINIA

CHAPTER 22—CODE 1931

(As Amended by the Legislature in Regular Session, 1935)

INCLUDING:

the Child Labor Law of Chapter 21, Code 31; the Law for the Safe Development and ration of Oil and Gas Wells, Code 1931; ining Owners, Code 1931; Explosives iciously Placed, Acts 1933—and All Other s Pertaining to Mining, Also Suggested e Rules.

1935 EDITION

Compiled By
WEST VIRGINIA DEPARTMENT OF MINES
1935

Manufactured and for Sale by
HOME OFFICE SUPPLY COMPANY
Welch, West Virginia
B398

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MINES AND MINERALS
CHAPTER 22
Official Code West Virginia

Art.
1. Department of Mines.
2. Coal Mines.
3. Sand and Clay Mines, Quarries and Cement Works.
4. Oil and Gas Wells.

TICLE 1. Department of Mines.

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1. Department of Mines.
2. Chief of department of mines; duties; term of office.
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4. Same; oath; bond.
5. Same; record of inspections; authority.
6. Same; annual report to governor.
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10. Mine rescue car; equipment; use for educational and training work.
11. Mine rescue crews.
12. Director of mine rescue work; qualifications; term of office; salary.
13. Offenses; penalties; jurisdiction.

Department of Mines.—There shall state department of mines, which shall its purpose the supervision of the ex- and enforcement of all state laws per-

taining to the inspection of mines, enacted for the safety of persons employed within or at the mines within this State and the protection of mine property and other property used in connection therewith. (1905, c. 46, §1; 1907, c. 78, §1; 1915, c. 10, §1; 1919, c. 32, §1; Code 1923, c. 15H, 10; 1925, c. 88, §1.)

§2. Chief of Department of Mines; Duties; Term of Office.—The department of mines shall be in charge of an official to be known as the chief of the department of mines, who shall be appointed by the governor, by and with the advice and consent of the senate. He shall have full charge of the department and shall supervise and direct the inspection of mines as provided by law. The chief of the department of mines in office on the date this Code takes effect shall, unless sooner removed, continue to serve until his term expires and his successor has been appointed and has qualified. On or before the first day of January, nineteen hundred and thirty-four, and on or before the first day of January of each fourth year thereafter the governor shall appoint a chief of the department of mines to serve for a term of four years, commencing on said first day of January. (1883, c. 70, §1; 1897, c. 59; 1901, c. 106, §§1a, 2c; 1905, c. 46, §1; 1907, c. 78, §1; 1915, c. 10, §§1, 2; 1919, c. 32; §§1, 2; Code 1923, c. 15H, §§10, 11; 1925, c. 88, §§1, 2.)

§3. Same; Qualifications; Salary.—The chief of the department of mines shall be a male citizen of West Virginia, and shall be a competent person, having had at least eight years' experience in the working, ventilation and drainage of coal mines. two years

ich have been in this State, and having a ctical and scientific knowledge of all noxi- and dangerous gases found in such mines. diploma from any accredited engineering ol shall qualify as two years' working ex- ience. He shall devote all of his time to duties of his office, and shall not be di- tly or indirectly interested in a financial in any coal mines in this State. The sal- of the chief of the department of mines l be seven thousand dollars per annum, traveling expenses, which shall be paid thly out of the state treasury upon a re- ition upon the state auditor, properly cer- d by the chief of the department of . (1883, c. 70, §§1, 2; 1897, c. 59; , c. 106, §§1c, 2b; 1905, c. 46, §1; 1907, §1; 1915, c. 10, §4; 1919, c. 32, §4; 1923, c. 15H, §11; 1925, c. 88, §4; , c. 17.)

Same; Oath; Bond.— The chief of the rtment of mines shall, before entering the discharge of his duties, take the of office prescribed by the Constitution, hall execute a bond in the penalty of housand dollars, with security to be ap- d by the governor, conditioned upon the ful discharge of his duty, a certificate hich oath and which bond shall be filed e office of the secretary of state. (1883, §2; 1897, c. 59; 1901, c. 106, §2a; c. 46, §2; 1907, c. 78, §2; 1915, c. 10, ode 1923, c. 15H, §11; 1925, c. 88, §3.)

Same; Record of Inspections; Au- .—The chief of the department of shall keep and index a permanent re- f all inspections made by himself and trict mine inspectors. All records of partment of mines shall, at all times,

be open to the inspection of any citizen this State, and shall be laid before the gov nor of the State upon his request at any tim The chief of the department of mines sh have authority to visit, enter and exam any mine and may call the assistance of a district mine inspector or inspectors to a mine. (1897, c. 59; 1901, c. 106, §1a; 19 c. 46, §1; 1907, c. 78, §1; 1915, c. 10, Code 1923, c. 15H, §11; 1925, c. 88, §5.)

§6. Same; Annual Report to Governor. The chief of the department of mines sh annually make a full and complete writ report of his proceedings to the governor the State for the year ending the thirty-f day of December. Such report shall incl the reports of the district mine inspect the number of visits and inspections, made the State by the district inspectors; the qu tity of coal and coke produced in the St the number of men employed, number mines operated, ovens in and out of blast, provements made, prosecutions, and other information in relation to the sub of mines, mining inspections and needed islation as he may deem of public inte and beneficial to the mining interests of State. Such report shall be filed with governor on or before the thirtieth day June next succeeding the year for whic was made, and shall be printed upon the quisition of the governor and distrib among the operators, miners and citizen the State. (1901, c. 106, §3a; 1905, c. §3; 1907, c. 78, §3; 1915, c. 10, §6; 1923, c. 15H, §11; 1925, c. 88, §6.)

§7. Mining Districts; Mine Inspec Term of Office.—The chief of the de

ent of mines, with the approval of the gov-
rnor, shall divide the State into twenty-five
ining districts, in such manner as to equal-
e as far as practicable the work of each in-
pector. The chief of the department of
nes shall appoint one inspector for each
ining district within the State, and three
ine inspectors at large. The mine inspec-
rs in office on the date this Code takes ef-
ct shall, unless sooner removed as provided
law, continue to serve until their terms
pire and their successors have been ap-
inted and have qualified. On or after the
st day of January, nineteen hundred and
rty-four, and on or after the first day of
nuary of each fourth year thereafter, the
ief of the department of mines appointed
the term commencing on said first day of
nuary shall appoint one inspector for each
ining district within the State, and three
ne inspectors at large, to serve for a term
four years commencing on said first day
January. (1887, c. 50, §§1, 2; 1890, c.
§1, 2; 1893, c. 22, §1; 1897, c. 59; 1901,
, §§1a, 2c, 3c; 1905, c. 46, §§2, 4; 1907,
, §§2, 4; 1915, c. 10, §7; 1919, c. 32,
1921, c. 118, §7; Code 1923, c. 15H, §12;
c. 88, §7; 1929, c. 16.)

Mine Inspector; Qualifications; Oath; Removal; Salary and Expenses.—
y person appointed to the office of
inspector shall be a citizen of West Vir-
, of good moral character and temper-
bits, shall have a practical knowledge
ining and the proper ventilation and
ge of mines, and a knowledge of the
met with in coal mines, and shall be a
of at least six years' experience in coal
. A diploma from any accredited school
ining engineering, or having otherwise

been engaged as an employee for six years within coal mines, shall qualify as two years experience. He shall not while in office be interested as owner, operator, stockholder, superintendent or engineer of any coal mine. Before entering upon the discharge of his duties he shall take the oath of office prescribed by the Constitution, and shall execute a bond in the penalty of two thousand dollars with security to be approved by the governor conditioned upon the faithful discharge of his duty, a certificate of which oath and which bond shall be filed in the office of the secretary of state.

A mine inspector shall be removed from office by the chief of the department of mines for incompetency, neglect of duty, drunkenness, malfeasance or for other good cause.

The salaries of mine inspectors shall not be less than three thousand nor more than three thousand six hundred dollars per annum, and actual traveling expenses; such salary to be determined by the chief of the department of mines, and based on the ability and experience of the inspector: Provided, That before payment of such expenses shall be made to the inspector, he shall file an account of such expenses, verified by his affidavit, showing they accrued in the discharge of his official duties. (1887, c. 50, §§1, 1890, c. 9, §2; 1897, c. 59; 1901, c. §§1d, 2a, 2b; 1905, c. 46, §§2, 3; 1907, c. §2; 1915, c. 10, §§9, 10; 1919, c. 32, §9; 1923, c. 15H, §12; 1925, c. 88, §§8, 9; c. 16.)

§9. Same; Inspections; Reports.—Each of the mine inspectors shall report in writing weekly, to the chief of the department

..., the number and condition of all mines ...ected by him during each week, and shall ...ver to the operator or operators of each ... inspected a certificate of inspection, and ... post a duplicate certificate at a promi... place of the operating company where ... conveniently be read by any of the ... employees. The duplicate shall remain ...d until a subsequent certificate is issued ... mine inspector. A mine inspector ap...ed for a particular district shall visit ... mine in his district at least once in every ... months, or oftener if called upon in ...ing by ten men engaged in any one mine, ...y the owner, operator or superintendent ...h mine, and make a personal examina... of each working place, and also aban...d parts of the mine where gas is liber... and outside of the mine where any dan... may exist to the workmen in their re...ive districts, and shall particularly ex... into the condition of the mine as to ...tion, drainage and general safety, and ...ake a report of such examination, and ...ll see that all provisions of the mining ... are strictly carried out. It shall be ...ful for any mine inspector to appoint ...eputy or other person to do and per... any work required of such inspector. ...c. 30, §4; 1890, c. 9, §4; 1897, c. 59; ...c. 106, §§1b, 3a; 1905, c. 46, §2; 1907, ...§2; 1915, c. 10, §11; Code 1923, c. ...§2; 1925, c. 88, §10; 1929, c. 16.)

... Mine Rescue Car; Equipment; Use ...ucational and Training Work.—The ... the department of mines is hereby ...ed, with the approval of the state ... control, to purchase, equip and oper... the use of said department a mine res... Such car shall be fully equipped

with life saving apparatus and applian
suitable for use in cases of mine disaster.
shall be stationed at Charleston when not
active use, and the chief of the departm
of mines shall make all necessary arran
ments for the haulage and operation of s
car, so that the same may be hauled over
lines of any railroad and may reach the sc
of any mine disaster with the utmost pro
titude. Such mine rescue car may also
equipped and used, under such rules and
gulations as may be prescribed by the ch
of the department of mines, for educatio
purposes and for training in rescue w
among the mine workers in this State, such
shall tend to conserve human life and p
erty in the mining industry of this St
(1917, c. 47, §§1, 2; Code 1923, c. 1
§§97, 98.)

§11. Mine Rescue Crews.—The chie
the state depatmernt of mines is hereby
thorized to train and employ at each of
mine rescue stations, operated by that dep
ment within the State, two rescue crew
six members each. Each member of a re
crew shall devote four hours twice
month for training purposes, and shal
available at all times to assist in rescue
at explosions and mine fires. He shall
ceive for his services the sum of five do
per month, payable on requisition appr
by the chief of the department of mines,
such other sums, to be paid by the oper
company, as may be agreed upon when
gaged in rescue work at explosions or
fires. The chief of the department of
may remove any member of a rescue cr
any time for neglect of duty, or failu
obey instructions. (1927, c. 23.)

§12. **Director of Mine Rescue Work; ualifications; Terms of Office; Salary.**— e chief of the department of mines shall ppoint, subject to the approval of the gov- or of the State, a director of rescue work have charge of the operation of said mine ue car. Such director shall be a man pos- ed of the same qualifications as those re- ed for the office of chief of the depart- t of mines, as prescribed in section three this article; and, in addition thereto, he have had thorough training in mine res- work and extended experience in the res- work of mine disasters in this State. The of office of the director shall be the as the district mine inspectors. The of the director shall be two thousand hundred dollars per annum and actual ling expenses. Such salary and expenses be paid monthly out of the state treas- upon approval of the chief of the depart- of mines. (1917, c. 47, §3; Code 1923, §99; 1929, c. 89, §17.)

Offences; Penalties; Jurisdiction.— chief of the department of mines who violate any of the provisions contained tion two to seven, inclusive, of this ar- shall, upon conviction thereof, be fined s than twenty-five dollars nor more two hundred dollars, and may, in the ion of the court, be imprisoned in the jail not exceeding one year.

mine inspector who shall violate any provisions contained in section eight e of this article shall, upon conviction be fined not less than one hundred re than five hundred dollars, and be d from office by the chief of the de- t of mines.

In all prosecutions under this article, th circuit court, criminal court, intermediat court having criminal jurisdiction, and ju tices of the peace, shall have concurrent ju isdiction, with the right of appeal. (1907, 78, §26; 1915, c. 10. §87; Code 1923, c. 15 §36e (5); 1925, c. 88, §71.)

ARTICLE 2. Coal Mines.

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§1. **Definitions; Scope of Article.**—Min In this article the term "mine" shall inclu the shafts, slopes, drifts, or incline plan connected with excavations penetrating co stratum or strata, which excavations are ve tilated by one general air current, or divisio thereof, and connected by one general syste of mine railroads over which coal may be d livered to one or more points outside t mine, when such is operated by one operat

Excavations and Workings: The ter "excavations" and "workings" shall inclu all the excavated portions of the mine, th abandoned as well as the places actually ing worked; also all underground worki and shafts, tunnels, and other ways and op ings, and all such shafts, slopes, tunnels other openings in the course of being s or driven, together with all roads, applian machinery and material connected with same below the surface.

Shaft: The term "shaft" shall mean a tical opening through the strata that is may be used for the purpose of ventilatio drainage, or for hoisting men or materia both, in connection with the mining of

Slope: The term "slope" shall mean a cline or opening used for the same pur as a shaft.

Operator: The term "operator" shall ean any firm, corporation, or individual erating any coal mine, or any part thereof.

Superintendent: The term "superinten- ent" shall mean the person who shall have, behalf of the operator, immediate super- ion of one or more mines.

Mine Foreman: The term "mine foreman" ll mean the person whom the operator or perintendent shall place in charge of the e workings of the mine and of the per- employed therein.

Approved Safety Lamp or Electric Lamp: e term "approved safety lamp" or "ap- ved electric lamp" shall mean any safety p, or electric lamp, approved by the de- tment of mines.

Unless otherwise expressly provided, the visions of this article shall apply to all l mines. (1887, c. 50, §18; 1907, c. 78, ; 1915, c. 10, §§85, 86; Code 1923, c , §36e (4), (5); 1925, c. 88, §70.)

MINE MAPS

. Mine Map; Certificate of Engineer; alty.—The operator, or agent, of every mine shall make, or cause to be made, an rate map or plan of such mine, on a scale e stated thereon, of one hundred, two red or three hundred feet to the inch. map or plan shall show the openings or rations, the shafts, slopes entries, air- with darts or arrows showing directions currents, headings, rooms, pillars, and portions of such mine or mines as may been abandoned, the general inclination coal strata, and so much of the pro- lines and the outcrop of the coal seam tract of land on which the mine is lo- as may be within one thousand feet of

any part of the workings of such mine. A true copy of such map or plan shall be delivered by such operator to the inspector of his district, to be preserved among the records of his office and turned over to his successor in office; but in no case shall any copy of the same be made without the consent of the operator or his agent. The original map or a true copy thereof, shall be kept by such operator at the office of the mine, and open at all reasonable times for the examination and use of the inspector, and such operator shall, twice within every twelve months, while the mine is in operation, cause such survey and the map thereof to be extended so as to accurately show the progress of the workings, the property lines and outcrops as above provided.

The map or maps required by this section shall have the certificate of the engineer making the same, acknowledged thereon before a notary public, or justice of the peace, in the following form:

I, the undersigned, hereby certify that the map is correct and shows all the information to the best of my knowledge and belief, required by the mining laws of this State, and covers the period ending .....

.....

.....

Engineer

Acknowledged before me, a .....

....., this .....

of .....

.....

Any engineer who shall knowingly make any such map which does not correctly show the data required in this section, or knowingly make any false statement in connection therewith, shall be guilty of a misdemeanor, and, upon conviction, shall be fined not less than fifty nor more than two hundred dollars. (1883, c. 70, §3; 1887, c. 50, §5; 1901, c. 106, §5; 1907, c. §5; 1915, c. 10, §15; Code 1928, c. 15H, §13; 1925, c. 88, §11.)

[3. **Failure of Operator to Furnish Map; Incorrect Map.**—If the operator, or agent, of any coal mine shall neglect or fail to furnish the mine inspector of his district a copy of the map, or extension thereof, as provided in the preceding section of this article, the mine inspector is hereby authorized to cause a correct survey and map, or plan, of said coal mine, or the extension thereof, to be made at the expense of the operator of such mine, the cost of which shall be recoverable from the operator as other debts are recoverable by law. If at any time the chief of the department of mines has reason to believe that such map, or plan, or extension thereof, furnished in pursuance of the preceding section, be materially incorrect, and will not serve *the purpose for which it* was intended, he may have the survey and map, or plan, or extension thereof, made or corrected, and the expense of making such survey and map, plan, or extension thereof, under the direction of the chief of the department of mines, shall be paid by the operator, and the same may be collected as other debts are recoverable by law; and if found correct, the expense thereof shall be paid by the State. (1883, c. 70, §3; 1887, c. 50, §5; 1907, c.

78, §6; 1915, c. 10, §16; Code 1923, c. 15H, §14; 1925, c. 88, §12.)

VENTILATION AND SAFETY MEASURES

§4. Ventilation of Mines in General; Number to Work in Same Air Current.—The operator, agent or mine foreman of every coal mine, whether worked by shaft, slope or drift, shall provide and hereafter maintain for every such mine adequate ventilation affording no less than one hundred cubic feet of air per minute for each and every person employed in such mine and as much more as the district mine inspector may require which shall be circulated around the main headings and cross headings and working places to an extent that will dilute, render harmless and carry off the noxious and dangerous gases liberated therein. As working places advance, break throughs for air shall be made not to exceed eighty feet apart, and pillars, or line brattice or other approved methods of ventilation shall be used so as to properly ventilate the face. With the approval of the mining department greater distances than specified above may be made between break throughs. All the break throughs between the intake and return airways not required for the passage of air shall be closed with stoppings substantially built with suitable material, which shall be approved by the district mine inspector, so as to keep working places well ventilated.

No more than sixty persons shall be permitted to work in the same air current: **Provided,** That a larger number, not exceeding eighty persons, may be allowed by the district mine inspector where, in his judgment it is impracticable to comply with the foregoing requirements.

No operator, agent or mine foreman shall
rmit any person to work where they are
ble to maintain at least one hundred cubic
t of air per minute; but this shall not be
nstrued to prohibit the operator from em-
ying men to make the places of employ-
nt safe and to comply with this require-
t. While the repair work necessary to
the mine in condition to comply with the
is in progress, no person or persons shall
permitted to enter that part of the mine
cted except those actually employed in
the necessary repair work. (1883, c.
5; 1887, c. 50, §10; 1901, c. 106, §10;
, c. 78, §11; 1915, c. 10, §§17, 19;
1923, c. 15H, §15; 1925, c. 88, §13
(e), (f), (g).)

**Ventilation of Mines Liberating Ex-
e Gas; Stoppings; Doors.**—In all mines
ting explosive gas and where there is
reason to believe that gas will be en-
tered in the future workings and develop-
of the mine, the minimum ventilation
be one hundred and fifty cubic feet per
te for each and every person employed
, and as much more as one or more
district mine inspectors may deem re-
and all stoppings on the main entries
be substantially built of masonry, con-
or other incombustible material, which
be approved by the district mine in-
, so as to keep the working places well
ated. Doors on main haulways shall be
d in gaseous mines where practi-
and overcasts built of masonry or other
ustible material and of ample strength
be adopted, and where doors are used
ust be built in a substantial manner
ng so as to close automatically when
ucted (1901, c. 106, §10; 1907, c.

78, §12; 1915, c. 10, §26; Code 1923, c. 15H, §19; 1925, c. 88, §13 (i).)

§6. Fans—The ventilation of mines shall be produced by means of fans, mechanically operated, unless otherwise ordered by the chief of the department of mines. Building in which the ventilating fan is inclosed shall be constructed of noncombustible material or otherwise protected from damage by fire by such safeguards as may be approved by the department of mines.

The fan (or fans) shall be kept in operation night and day, unless written permission to do otherwise be granted by the chief of the department of mines, or the district inspector in whose district the mine is located. In case of accident to a ventilating fan or its machinery whereby the ventilation of the mine is seriously interrupted, the mine foreman shall order the men to withdraw immediately from the mine, and he shall not allow them to return to their work until the ventilation has been restored and the mine has been thoroughly examined by him, or by an assistant mine foreman, or fire boss, and reported safe. (1901, c. 106, §10; 1907, c. 78, §13; 1915, c. 10, §29; Code 1923, c. 15H, §21; 1925, c. 88, §13 (a), (b).)

§7. Plan of Ventilation.—Every operator or agent, of a coal mine, before making any new or additional openings, shall submit to the chief of the department of mines, for the information and approval, a plan showing the proposed system of ventilation and equipment of the openings with their location and relative positions to adjacent developments, and no such new or additional openings shall be made until approved by the chief of

department of mines. (1907, c. 78, §7; 1915, c. 10, §30; Code 1923, c. 15H, §22; 1925, c. 88, §13 (c).)

§8. Rooms and Entries Driven in Advance of Air Current.—Should the mine inspector discover any room, entry, airway, or other working places, being driven in advance of the air currents contrary to the requirements of this article, he shall order the workmen in such places to cease work at once until the law is complied with. (1907, c. 78, §15; 1915, c. 10, §13; Code 1923, c. 15H, §12; 1925, c. 88, §13.)

§9. Unused and Abandoned Parts of Mines.—All unused working and abandoned parts of the mines must be protected by such safeguards as will prevent, so far as practicable, the accumulation or overflow of gas therein, and all avenues leading thereto shall be so arranged and conducted as to give cautionary notice to all persons of the danger of entering therein; and in order to secure the safety of the workmen in general against the danger in such unused or abondoned sections of the mine, notice shall be posted warning all persons not to enter such parts of the mine except persons authorized to make examination of such section, and it shall be unlawful for any person, except as aforesaid, to enter such parts of said mine. (1901, c. 4, §10; 1907, c. 78, §12; 1915, c. 10, §27; Code 1923, c. 15H, §19; 1925, c. 88, §13 (b).)

§10. Petroleum and Alcohol Products Prohibited as Motive Power in Mines.—No product of petroleum, or alcohol, or any compound that in the opinion of the inspector will contaminate the air to such an extent as to be injurious to the health of the miner

shall be used as motive power in any mine. (1915, c. 10, §18; Code 1923, c. 15H, §15; 1925, c. 88, §13 (h).)

§11. Coal Dust.—In all mines, accumulations of fine, dry coal dust shall, as far as practicable, be removed from the mine, and all dry and dusty operating sections kept thoroughly watered down or rock dusted or dust allayed by such other methods as may be approved by the state department of mines. (1887, c. 50, §10; 1901, c. 106, §10; 1907, c. 78, §11; 1915, c. 10, §20; Code 1923, c. 15H, §15; 1925, c. 88, §14; 1929, c. 16, §14.)

§12. Telephone and Other Safety Devices.—The operator, or agent, of every coal mine worked by shaft shall provide and maintain a metal tube, telephone or other approved means of communication from the top to the bottom of such shaft, suitably adapted to the free passage of sound, through which conversation may be held between persons at the top and at the bottom of the shaft; also the ordinary means of signaling, and an approved safety catch, and a sufficient cover overhead on every cage used for lowering or hoisting persons, and at the top of the shaft an approved safety gate, and an adequate brake on the drum of every machine used to lower or hoist persons in such shaft. Said operator or agent shall have the machinery used in lowering or hoisting persons into or out of the mine kept in safe condition, and inspected once in each twenty-four hours by some competent person, and there shall be cut out around the side of the hoisting shaft, driven through the solid strata at the bottom thereof, a traveling way not less than six feet high and three feet wide to enable a

...n to pass the shaft in going from one side ...f it to the other without passing over or un... ...er the cage or other hoisting apparatus. ...1887, c. 50, §8; 1907, c. 78, §9; 1915, c. ...0, §21; Code 1923, c. 15H, §16; 1925, c. ...8, §15.)

§13. **Engineer in Charge of Hoisting Ma...inery; Qualifications; Persons Permitted ... Ride in Cage or Car.**—No operator or ...ent of any coal mine worked by shaft, slope ... incline, shall place in charge of any engine ... drum used for lowering or hoisting persons ...ployed in such mine any but competent ...d sober engineers or drum runners; and no ...ineer in charge of such machinery shall ...w any person, except such as may be de...ted for this purpose by the operator or ...nt, to interfere with any part of the ma...nery; and no person shall interfere with ...intimidate the engineer or drum runner ...the discharge of his duties. In no case ...re the mine is operated or worked by ...ft or slope shall more than ten persons ... in any cage or car at one time, without ... approval of the chief of the department ...ines first having been obtained, and no ...on shall ride on a loaded cage or car in ...shaft or slope, or on any incline. (1887, ...§9; 1907, c. 78, §10; 1915, c. 10, §23; ...c. 119, §17; Code 1923, c. 15H, §17; ...c. 88, §17.)

...**Uniform Checking System.**—The op...r or agent of every shaft mine shall in... ...a uniform system of checking the em...es in and out of the mine, whereby each ...ree upon entering the mine shall be ...a check by which he shall be identified, ...hich check shall be placed in its proper

place on the check board by the employee when leaving the mine. (1915, c. 10, §22; Code 1923, c. 15H, §16; 1925, c. 88, §16.)

§15. First Aid Equipment.—in every mine where one hundred or a less number of men are employed underground, it shall be the duty of the operator thereof to keep always on hand at the mine two properly constructed stretchers, two woolen and waterproof blankets, and all necessary requisites which may be advised by the medical practitioner employed by the company, and for each additional fifty men so employed, one additional stretcher and equipment as above specified shall be furnished. (1901, c. 106, §11; 1907, c. 78, §15; 1915, c. 10, §24; Code 1923, c. 15H, §17; 1925, c. 88, §18.)

§16. Safety or Electric Lamps.—Mines which liberate explosive gas from the coal or adjacent strata in dangerous quantities, and where three-fourths of one per cent, determined by air analysis, or other approved methods, on return air currents, shall, upon order of the chief of the state department of mines, be worked exclusively by the use of approved safety lamps, or approved electric lamps, and in such mine or mines no open lamp or torch shall be used except as may be permitted in writing by the said chief: **Provided, however,** That the foregoing provision requiring the use of approved safety lamps or approved electric lamps shall not be effective in mines or sections of mines where the ventilation may be increased in sufficient volume to dispel, eliminate or reduce the methane content below the percentage hereto mentioned. In mines where flame safety lamps and approved electric lamps are

quired to be used for working therein, the lamps shall be in charge of some person to be designated by the mine superintendent; and at least two flame safety lamps shall be kept in reserve and ready for use at every coal mine whether such mine liberates explosive gas or not. All mine foremen and fire bosses employed in gaseous mines shall, at all times, carry an approved flame safety lamp for the purpose of detecting the presence of explosive gas, such lamp to be kept lighted at all times when in use inside the mines. (1887, c. 50, §10; 1901, c. 106, §10; 1907, c. 78, §14; 1915, c. §28; Code 1923, §15H, §20; 1925, c. 88, §20;. 1929,. c. 16, §8.)

§17. **Mine Openings or Outlets; Roadway; Hoisting Equipment at Shaft Outlets; Limitation of Section.**—It shall be unlawful for the operator, agent or mine foreman of any coal mine to employ any person to work in such mine, or permit any persons to be in the mine for the purpose of working therein, unless they are in communication with at least two openings, or outlets, to each seam, separated by natural strata, such openings to be not less than three hundred feet apart, if the mine be worked by shaft, and not less than fifty feet apart at the outlets, if worked by slope or drift; but this requirement of a distance of three hundred feet between openings or outlets to shaft mines shall not apply where such openings or outlets have been made prior to the adoption of this Code. To each of the outlets there shall be provided from the interior of the mine a safe and suitable roadway, properly drained, which shall at all times, while the mine is in operation, be kept free from all obstructions that might prevent travel thereon in case of an

emergency. If either of the outlets be by shaft, it shall be fitted with safe and avail- able appliances, such as stairs or hoisting ma- chinery, which shall at all times, when the mine is in operation, be kept in order and ready for immediate use, whereby persons employed in the mine may readily escape in case of accident, and in addition to the regu- lar hoisting machinery every shaft used for lowering or hoisting men shall be provided with a complete emergency windlass, or other hoisting device of ample strength for hoist- ing men from the mine, the same to be ap- proved by the department of mines.

This section shall not apply to any mine while work is being prosecuted with reason- able diligence in making communication be- tween such outlets, necessary repairs and re- moving obstructions, so long as not more than twenty persons are employed at any one time in the mine; neither shall it apply to any mine, or part of a mine, in which a second outlet has been rendered unavailable by rea- son of the final robbing of pillars, prepa- tory to abandonment, so long as not more than twenty persons are employed therein at any one time; but before a limited number of men are so permitted to work, approval of the necessity therefor shall first be ob- tained from the department of mines by the operator. (1887, c. 50, §6; 1907, c. 78, §1; 1915, c. 10, §31; Code 1923, c. 15H, §6; 1925, c. 88, §21.)

§18. Unsafe Mine; When To Be Closed; How Reopened.—The operator or agent of every coal mine shall furnish the inspector proper facilities for entering such mine, for making examinations or obtaining informa- tion; and if any inspector shall discover that any mine does not, in respect to appli-

for the safety of the persons employed therein, conform to the provisions of this article, or that by reason of any defect or practice in or at such mine the lives or health of persons employed therein are endangered, he shall immediately, in writing, notify such operator or agent thereof stating in such notice the particulars in which he considers such mine to be defective or dangerous, and if he deems it necessary for the protection of the lives and health of the persons employed in such mine, he shall, after giving one day's notice in writing to the operator or agent, notify immediately the chief of the department of mines, who shall forthwith examine the mine reported to be unsafe.

If, upon such examination, the mine is in fact found to be in an unsafe condition, the chief of the department of mines shall forthwith order the mine to be closed until it is placed in safe and proper condition for mining operations. The owner or operator of any mine so closed may apply to the circuit court wherein such mine is located, or the judge thereof in vacation, by petition, for an order directing said mine to be reopened, and the court, or the judge thereof in vacation, shall immediatly hear and determine the matter arising upon such petition, and if upon the hearing thereof the court, or the judge thereof in vacation, shall find that the mine is in a reasonably safe condition, the prayer of said petition shall be granted; but at least five days' notice of the hearing shall be given to the mine inspector appointed for or acting in that district and the chief of the department of mines before the hearing; and in all such hearings the attorney general shall appear for the State and defend the same. (1907, c. 50, §12; 1907, c. 78, §16; 1915, c.

10, §25; Code 1923, c. 15H, §18; 1925, c. 88, §19; 1929, c. 16, §7a.)

§19. No Act Permitted Endangering Security of Mine; Search for Intoxicants, Matches, Etc.—No miner, workman or other person shall knowingly injure any shaft, lamp, instrument, air course, or brattice, or obstruct or throw open airways, or carry matches or open lights in the places worked by safety lamps, or disturb any part of the machinery or appliances, open a door used for directing ventilation and not close it again, or enter any part of a mine against caution, or disobey any order given in carrying out any of the provisions of this article, or do any other act whereby the life or health of any person employed in the mine or the security of the mine is endangered.

In mines where electric or safety lamps are used no miner, workman or other person shall at any time enter any mine and carry therein any intoxicating liquors, matches, pipes, cigars, cigarettes, or any device for making lights or fire not authorized or approved. In all such mines the operator shall at least once each week, search or cause to be searched any person entering or about to enter any mine, to prevent such person from taking or carrying therein any of the above mentioned articles, and no person shall be permitted to enter any mine while under the influence of intoxicating liquors. (1887, c. 50, §14; 1890, c. 9, §14; 1907, c. 78, §1; 1915, c. 10, §§40, 41; Code 1923, c. 15, §§32, 33; 1925, c. 88, §26.)

§20. Stable in Mine.—No operator, agent or mine foreman shall provide a horse or mule stable inside of any mine unless sp

is excavated in solid strata of rock, slate or coal. If excavated in the coal seam, the wall shall be built of brick, stone or concrete not less than four inches in thickness, or of steel plates, and shall be built from the bottom slate to the roof. No wood or other combustible material shall be used in the construction of the inside of the stable. The air current used for the ventilation of the stable shall not be intermixed with the air current used for ventilating any other portion of the mine, but shall be conveyed directly to the return air current. No open lights shall be permitted in any stable in any mine. No hay or straw shall be taken into any mine, unless pressed or made up in compact bales, which shall be kept in a storehouse built apart from the stable, constructed in the same manner as the stable. Under no circumstances shall hay be stored in the stable. All refuse and waste shall be removed from the stable and shall not be allowed to accumulate in the mine. (1915, c. 10, §44; Code 1923, c. 15H, §26; 1925, c. 88, §29.)

§21. **Steam Locomotive in Mine.**—No steam locomotive shall be used in mines where men are actually employed in the extraction of coal except by the consent of the district mine inspector; but this shall not be construed to prohibit any mine owner from operating a steam locomotive through any tunnel, haulway or part of a mine that is not in actual operation and furnishing coal. (1907, c. 78, §24; 1915, c. 10, §37; Code 1923, c. 15H, §29; 1925, c. 88, §24.)

USE OF ELECTRICITY

§22. **Electricity.**—The operator, agent or mine foreman of any coal mine in which elec-

tricity is used as a means of power shall comply with the provisions of sections twenty-three to thirty-two, inclusive, of this article. (1915, c. 10, §47; Code 1923, c. 15H, §36b (1); 1925, c. 88, §31.)

§23. Protection Against Trolley or Power Wires.—On all haulage roads, landings and partings, where men are required regularly to work or pass under trolley or other bare power wires which are placed less than six and one-half feet above top of rail, a suitable protection shall be provided. This protection shall consist of channeling the roof, placing boards along the wire, which shall extend below it, or the use of other approved devices that afford protection. (1915, c. 10, §48; Code 1923, c. 15H, §36b(1); 1915, c. 88, §32.)

§24. Insulation of Machine or Feed Wires.—All machine or feed wires shall be placed on glass or porcelain insulators, which shall be so placed as to prevent the wires coming in contact with the coal. When machine or feed wires are carried in the same entry with the trolley wire, they shall be placed on the same side as the trolley wire, between trolley wire and rib, and protected so far as practicable from contact therewith and positive feed wires crossing places where persons or animals are required ot travel shall be safely guarded or protected from such persons or animals coming in contact therewith, as provided in the preceding section. (1915, c. 10, §49; Code 1923, c. 15H, §36b (1); 1925, c. 88, §33.)

§25. Location of Trolley or Feed Wire Switches.—All trolley and positive feed wires shall be placed on opposite sides of the track from refuge holes or necks of room, when

ered by the department of mines, and ires may be placed across the necks of ms when protected as provided in section enty-three of this article. Switches or cir- it breakers shall be provided to control the rrent at the mine and all important sec- ns in the mine. (1915, c. 10, §50; Code 23, c. 15H, §36b (1); 1925, c. 88, §34.)

38. **Power Wires and Cables in Shafts Manway Compartments.**—All power wires cables in hoisting shafts or manway com- rtments shall be properly insulated, sub- ntially fixed and well protected. (1915, 10, §51; Code 1923, c. 15H, §36b (1); 5, c. 88, §35.)

37. **Electric Haulage; When Permitted.** ny mine worked by safety or approved ric lamps shall work electric haulage lo- otives operated from trolley wire upon intake airway fresh from the outside; ex- where permission is granted by the chief he state department of mines, such mine operate such locomotive on the return ys. (1915, c. 10, §52; Code 1923, c. §36b(1); 1925, c. 88, §36; 1927, c. 24; c. 16, §36.)

1. **Electric Coal-Cutting Machines; Per- in Charge Thereof; Examination.**—In s mines the chief of the department of may designate where flame proof elec- al-cutting machines shall be used. No hall be placed in charge of a coal-cutt- chine in any gaseous portion of a mine s not a competent person, capable of ining the safety of the roof and the of the working places and detecting the ce of explosive gas. Machine runners e compelled to undergo an examination

to determine their fitness to detect explosi
gas before they are permitted to have char
of machines in mines liberating gas, unle
they be accompanied by a certified fire bo
or a machine runner or helper having pass
such an examination. Such examinati
shall be given by the mine foreman, a
blank forms for the same shall be furnish
by the department of mines. A copy sh
be retained on file at the mine office a
the original sent to the department of min
fully made out and signed by the machi
runner and mine foreman. (1915, c. 1
§53; Code 1923, c. 15H, §36b(2); 1925,
88, §37; 1929, c. 16, §37.)

**§29. Same; Limit to Use in Gaseous P
tion of Mine.**—In any gaseous portion o
mine, a coal-cutting machine shall not
brought within the last break through n
the working face until the machine man sh
have made an inspection for gas in the pl
where the machine is to work, unless s
examination is then made by some other c
petent person authorized or appointed
that purpose by the mine foreman. If
explosive gas is found in the place, the
chine shall not be taken in until the ga
removed. (1915, c. 10, §54; Code 1923
15H, §36b(2); 1925, c. 88, §38.)

**§30. Same; Detection of Fire Damp; C
sation of Work.**—In working places wh
gas is likely to be encountered, a safety l
or other suitable apparatus for the detec
of fire damp shall be provided for use
each machine when working and should
indication of fire damp appear on the fl
of the safety lamp, or other apparatus
for the detection of fire damp, the perso
charge shall immediately stop the mac
cut off the current at the nearest switch,

report the matter to the mine foreman, or fire boss, and the machine shall not again be started in such place until the mine foreman, fire boss, or a person duly authorized by either, has examined it and pronounced it safe. All coal-cutting machines shall be provided with a box specially designed for carrying and protecting safety lamps. (1915, c. 10, §55; Code 1923, c. 15H, §36b(2); 1925, c. 88, §39.)

§31. **Same; Periodic Examination for Gas.**—No coal-cutting machine shall be continued in operation in a gaseous portion of a mine for a longer period than half an hour without an examination as above described being made for gas, and, if gas is found, the current shall at once be switched off the machine, and the trailing cable shall forthwith be disconnected from the power supply. (1915, c. 10, §56; Code 1923, c. 15H, §32b (1); 1925, c. 88, §40.)

§32. **Same; Duties of Machine Men.**—Machine runners and helpers shall use care while operating mining machines. They shall not permit any person to remain near the machine while it is in operation. They shall examine the roof of the working place and see that it is safe before starting to operate the machine. They shall not move the machine while the cutter chain is in motion. (1915, c. 10, §57; Code 1923, c. 15H, §36b (3); 1925, c. 88, §41.)

USE OF OIL

§33. **Oil Used in Mines.**—Only animal, vegetable or parafine oil, or other oil as free from the evolution of smoke as a standard linseed oil when burned in a miner's torch, shall be used in any open lamp or torch for

illuminating purpose in any coal mine in thi State. Kerosene and blackstrap oil, or a mix ture of kerosene and blackstrap, shall not b used in miners' troches for illuminating pur poses in any coal mine in this State: Pro vided, That a mixture of mineral oil (othe than blackstrap oil) and vegetable oil can b used upon machinery used as motive powe to haul coal in any mine in this State, and mixture of mineral and vegetable oil can b used for all stationary lights. (1901, c. 3 §1; Code 1923, c. 15H, §37.)

§34. **Oil Tests.**—A standard cottonse oil shall have the following test: (a) It sh be free from mineral oils or mineral oil co pounds; (b) It shall be tested in a glass tu one and one-half inches in diameter by eig inches deep, and the oil shall be at a te perature of sixty degrees Fahrenheit wh the test is made, and shall not exceed twen four degrees Tagliabue hydrometer. (190 c. 31, §2; Code 1923, c. 15H, §38.)

§35. **Heating Oil for Test.**—If the oil be tested is below forty-five degrees Fahr heit temperature, it shall be slowly heated til it reaches eighty-five degrees temperatu Should the oil be above forty-five degr temperature and below sixty-five degrees shall be heated to seventy degrees, when, either case, it must be well shaken and lowed to cool gradually to a temperature sixty degrees, when the test shall be ma (1901, c. 31, §3; Code 1923, c. 15H, §3

§36. **Reading of Hydrometer.**—In test the gravity of oil the hydrometer shall when possible, read from below, and the

line which appears under the surface of the oil shall be regarded as the true reading. (1901, c. 31, §4; Code 1923, c. 15H, §40.)

§37. **Allowance for Error.**—Where the oil is tested in difficult circumstances an allowance of one-half of one degree may be made for error or paraffix. (1901, c. 31, §5; Code 1923, c. 15H, §41.)

§38. **Branding Oil Barrels and Containers.**—All oil sold to be used for illuminating purposes in the mines of this State shall be contained in barrels, casks or packages, branded conspicuously with the name and address of the manufacturer of such oil, the specific gravity of the same and the date of shipment. (1901, c. 31, §6; Code 1923, c. 15H, §42.)

§39. **Sale of Oil Not Complying with Test; Penalty.**—Any person, firm or corporation, either by itself or an agent or employee, who shall sell or offer for sale for illuminating purposes in any mine in this State any oil or any mixture or compound of oils which does not comply with the tests as prescribed in section thirty-four of this article shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than twenty-five nor more than one hundred dollars for each offense. (1901, c. 37, §7; Code 1923, c. 15H, §43.)

§40. **Use of Oil Not Complying with Test; Penalty.**—Any miner, or employee in any mine, or employee of any mine operator or mine owner, who shall knowingly use or permit to be used for illuminating purposes in any mine in this State any oil other than that described in section thirty-three of this ar-

ticle shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than five nor more than twenty-five dollars for each offense; and in default of payment of such fine within twenty days from the day of conviction, shall be given a sentence in the county jail for a period of not less than ten nor more than sixty days. (1901, c. 31, §8; Code 1923, c. 15H, §44.)

§41. Oil Tests to be Made by Mine Inspector; Penalty for Refusing to Permit Same.—It shall be the duty of the district mine inspectors, wherever they have reason to believe that oil is being used, or sold or offered for sale, in violation of any of the provisions of this article relating to oil, to take samples of the same and have them tested under the direction of the chief mine inspector, and if they are found to be inferior to the quality prescribed by such provisions the inspector shall make complaint to the prosecuting attorney of the county in which the offense in committed, who shall forthwith commence proceedings against the offender in any court of competent jurisdiction. Any miner, mine employee, firm, corporation or their agents, who shall refuse to permit the mine inspector to examine his or their oil used or sold for illuminating purposes in the coal mines in this State shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined five dollars or imprisoned in the county jail for not more than ten days for each offense. (1901, c. 31, §9; Code 1923, c. 15H, §45.)

FIRE BOSS

§42. Fire Boss; When to be Employed; Qualifications.—It shall be the duty of every mine owner or operator in this State, who

mines are known to liberate fire damp or other dangerous gas or gases, to employ a fire boss, or bosses, if necessary, who shall be a citizen and resident of this State, and who shall hold a certificate of competency for such position issued to him by the department of mines, after taking an examination held by the department of mines under its rules and regulations. He shall have such knowledge of fire damp and other dangerous gases as to be able to detect the same with the use of safety lamps, and shall have a practical knowledge of the subject of the ventilation of mines and the machinery and appliances used for that purpose, and shall be a person with at least three years' experience in mines liberating explosive gases. (1887, c. 50, §10; 1901, c. 106, §10; 1907, c. 78, §13; 1915, c. 10, §58; Code 1923, c. 15H, §36c; 1925, c. 88, §12.)

§43. **Same; Duties.**—It shall be the duty of the fire boss or bosses, where employed in such gaseous mines, to prepare a danger sign with red color at the mine entrance, and no person except the mine owner, operator or agent, and only then in case of necessity, shall pass beyond this danger signal until the mine has been examined by the fire boss and the same or certain parts thereof reported by him to be safe. It shall further be the duty of the fire boss or bosses to go into all the working places of such mine or mines, where gas is known to exist, or liable to exist, and carefully examine the same with a safety lamp, and do, or cause to be done, whatever may be necessary to remove from such working place or places all dangerous or noxious gases, and make the same safe for persons to enter therein as workmen. Such examination and removal of the gases shall begin within

three hours before the time each shift commences work, and it shall be the duty of the fire boss at each examination to leave evidence of his presence at the face of every place examined, by plainly marking on a board at the face for that purpose the date of examination. If the mine is safe, he shall remove the danger signal at the mine entrance or change the color thereof to safety, in order that the employee may enter such mine and begin work. (1887, c. 50, §10; 1901, c. 106, §10; 1907, c. 78, §13; 1915, c. 10, §59; Code 1923, c. 15H, §36c; 1925, c. 88, §43.)

§44. Same; Record of Condition of Mine.—The fire boss shall, upon having completed the examination of the mine before each shift, make a writen record of the condition of the mine within a book having a form prescribed by the chief of the department of mines, which record shall at all times be kept at the mine, subject to the inspection of the district mine inspector or chief of the department of mines. (1907, c. 78, §13; 1915, c. 10, §60; Code 1923, c. 15H, §36c; 1925, c. 88, §44.)

§45. Same; No Superior Officers.—In the performance of the duties devolving upon the fire bosses they shall have no superior officers, but all the employees working inside of such mine or mines shall be subordinate to them in their particular work. (1901, c. 10, §10; 1907, c. 78, §13; 1915, c. 10, §61; Code 1923, c. 15H, §36c; 1925, c. 88, §45.)

§46. Uulawful to Enter Mine Until Fire Boss Reports It Safe; Exception; Penalty. It shall be unlawful for any person to enter such mine or mines for any purpose at the beginning of work upon each shift there-

until such signal or warning has been given by the fire boss or bosses on the outside of the mine or mines as to the safety thereof, as by statute provided, except under the direction of the fire boss or bosses, and then for the purpose of assisting in making the mine safe. Each person who shall enter such mine, except as aforesaid, before such notice or signal has been given, or any operator, agent or fire boss who shall violate the provisions of this article, shall be guilty of a misdemeanor, and, upon conviction thereof, shall suffer the penalties hereinafter provided. (1887, c. 50, §10; 1901, c. 106, §10; 1907, c. 78, §13; 1915, c. 10, §62; Code 1923, c. 15H, §36c; 1925, c. 88, §46.)

MINE FOREMAN.

§47. **Mine Foreman; When to be Employed; Qualifications; Assistants.**—In every coal mine where five or more persons are employed in a period of twenty-four hours, the operator or agent shall employ a competent and practical inside overseer, to be called the foreman, who shall be a citizen and resident of this State, having had at least five years' experience in the working, ventilation and drainage of coal mines, and who shall hold a certificate of competency for such position, issued to him by the department of mines, after taking an examination held by the department of mines under its rules and regulations. In mines in which the operations are so extensive that all the duties devolving upon the mine foreman can not be discharged by one man, competent persons having had at least three years' experience in coal mines may be designated and appointed assistants, who shall act under the mine foreman's instructions, and shall be responsible for their conduct in the discharge of

their duties under such designation or employment. (1883, c. 70, §6; 1887, c. 50, §11; 1901, c. 106, §11; 1907, c. 78, §§15, 27; 1915, c. 10, §§63, 86; Code 1923, c. 15H, §§36d(1); 36e(5); 1925, c. 88, §§47, 70.)

§48. Same; Duties; Ventilation; Loose Coal, Slate or Rock; Props; Drainage of Water.—The duties of the mine foreman shall be to keep a careful watch over the ventilating apparatus, the airways, traveling ways, pumps and drainage. He shall see that as the miners advance their excavations proper break throughs are made as required by law to properly ventilate the mine; that all loose coal, slate and rock overhead in the working places and along the haulways are removed or carefully secured so as to prevent danger to persons employed in such mines and that sufficient props, caps and timbers, as nearly as posible of suitable dimensions, are furnished for the places where they are to be used, and such props, caps and timbers shall be delivered and placed at such points as the rules for the government of each mine provides for them to be delivered. The mine foreman shall have the water drained or hauled out of the working places, where practicable, before the miners enter, and such working places kept dry as far as practicable while the miners are at work. It shall be the duty of the mine foreman to see that the cross cuts are made as required by law, and that the ventilation is conducted by means of such cross cuts through the rooms by means of check doors placed in the entries or other suitable places, and shall not permit any room to be opened in advance of the ventilating current. The mine foreman shall measure the air current with an anemometer at least twice each month at the inlet and outlet and at or near the face

the advanced headings, and shall keep a record of such measurements in a book having a form prescribed by the chief of the department of mines. Sign boards directing the way to outlets or escapeways shall be conspicuously placed throughout the mine. (1883, c. 50, §6; 1887, c. 50, §11; 1901, c. 106, §11; 1907, c. 78, §15; 1915, c. 10, §64; Code 1923, c. 15H, §36d(2); 1925, c. 88, §48.)

§49. **Same; Refuge Holes.**—The mine foreman shall require that all slopes, engine planes and haulage roads used by any persons in the mine shall be made of sufficient width to permit persons to pass moving cars with safety; or refuge holes shall be made on one side of such haulage road not less than five feet in width, nor less than four feet in depth, and on a level with the road. The refuge holes shall be not more than eighty feet apart, and shall be kept free from obstructions. The roof and sides thereof shall be made secure and be whitewashed at all times. (1887, c. 50, §9; 1907, c. 78, §10; 1915, c. 10, §65; Code 1923, c. 15H §36d(2); 1925, c. 88, §49)

§50. **Same; Signals on Haulways; Lights at Mouth and Bottom of Shaft; Operation of Cages.**—On all haulways, where hauling is done by machinery of any kind, the mine foreman shall provide a proper system of signals, and a conspicuous light on the front and rear of every trip or train of cars when in motion in a mine. When hoisting or lowering of men occurs in the morning before daylight, or in the evening after darkness, at any mine operated by shaft the mine foreman shall provide and maintain at the shaft mouth a light of a

stationary character sufficient to show the landing and all surrounding objects distinctly, and sufficient light of a stationary character shall be located at the bottom of the shaft so that persons coming to the bottom may clearly discern the cages and other objects contiguous thereto. The mine foreman shall require that no cages on which men are riding shall be lifted or lowered at a rate of speed greater than six hundred feet per minute, and that no mine cars, either empty or loaded, shall be hoisted while men are being lowered or hoisted, and no cage having an unstable self dump platform shall be used for the carrying of workmen unless the same is provided with some device by which it may be securely locked when men are being hoisted or lowered into the mine. (1907, c. 106, §11; 1907, c. 78, §15; 1915, c. 10, §66; Code 1923, c. 15H, §36d(2); 1925, c. 88, §50.)

§51. Same; Bore Holes.—It shall further be the duty of the mine foreman to have bore holes kept, not less than twelve feet in advance of the face, and, where necessary, on sides of the working places that are being driven toward, and in dangerous proximity to, and abandoned mine or part of mine suspected of containing inflammable gases or which is filled with water. (1887, c. 50, §11; 1901, c. 106, §11; 1907, c. 78, §15; 1915, c. 10, §67; Code 1923, c. 15H, §36d(2); 1925, c. 88, §51.)

§52. Same; Instruction of Employees. It shall be the duty of the mine foreman or the assistant mine foreman, of every coal mine in this State, to see that every person

employed to work in such mine shall, before beginning to work therein, be instructed in the particular danger incident to his work in such mine, and furnished a copy of the mining law and rules of such mine. Every inexperienced person so employed shall work under the direction of the mine foreman, his assistant, or such other experienced worker as may be designated by the mine foreman or assistant, until he is familiar with the danger incident to his work. (1907, c. 78, §8; 1915, c. 10, §68; Code 1923, c. 15H, §36d(2); 1925, c. 88 §52)

§53. **Same; Daily Inspection of Working Places.**—The mine foreman or his assistants shall visit and carefully examine each working place in the mine each day while the miners of such places are at work, and shall direct that each working place shall be secured by props or timbers where necessary, to the end that the working places shall be made safe. Should the mine foreman or his assistants find a place to be in a dangerous condition, they shall not leave the place until it is made safe, or remove the persons working therein until such place is made safe by some competent persons designated for that purpose. (1887, c. 50, §11; 1901, c. 106, §11; 1907, c. 78, §8; 1915, c. 10, §69; Code 1923, c. 15H, §36d(2); 1925, c. 88, §53.)

§54. **Same; Protection Against Explosive Gas; Fencing Dangerous Places.**—The mine foreman shall see that every mine generating explosive gas is kept free of explosive gas ... all working places and roadways. Any accumulation of explosive or noxious gases in the worked out or abandoned portions of any mine shall be removed as soon as possible after its dis-

covery, if it is practicable to remove it. All places in live sections that are temporarily abandoned shall be examined as live workings by the fire boss on regular inspections. No person who may be endangered by the presence of such explosives or noxious gases shall be allowed in that portion of the mine until such gases have been removed. The mine foreman shall direct and see that all dangerous places and the entrance or entrances to worked out and abandoned places in all mines are properly fenced off across the openings, so that no person can enter, and that danger signals are posted upon such fencing to warn persons of the existing danger. (1915, c. 10, §70; Code 1923, c. 15H, §36d(2); 1925, c. 88, §54.)

§55. **Same; Ascertainment, Record and Removal of all Dangers.**—The mine foreman shall give prompt attention to the removal of all dangers reported to him by his assistants, the fire boss, or any other person working in the mine, and in case it is impracticable to remove the danger at once he shall notify every person whose safety is menaced thereby to remain away from the portion where the dangerous condition exists. He or his assistants shall, at least once each week, travel and examine all the air courses, roads and openings that give access to old workings or falls, and make a record of the condition of all places where danger has been found, with ink, in the book provided for that purpose. (1915, c. 10, §7; Code 1923, c. 15H §36d(2); 1925, c. 88, §5

§56. **Same; Duty to Notify Operator When Unable to Comply with Law; Duty of Operator; Penalty.**—The mine foreman shall notify, in writing, the operator or agent

the mine of his inability to comply with any of the requirements of these sections, and it shall then become the duty of the operator or agent to at once attend to the matter complained of by the mine foreman so as to enable him to comply with the provisions hereof if practicable. If any operator of a mine shall in any manner refuse to furnish all supplies necessary for the mine foreman to comply with the requirements of this article, after being requested so to do in writing by the mine foreman, he shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined as hereinafter provided. (1887, c. 50, §11; 1901 c. 106, §11; 1907, c. 78, §15; 1915, c. 10, §§39, 72; Code 1923, c. 15H, §§31, 36d(2); 1925, c. 88, §56.)

§57. **Same; Examination of Reports of Fire Boss.**—The mine foreman shall also, each day, read carefully and countersign with ink all reports entered in the record book of the fire bosses. (1915, c. 10, §73; Code 1923, c. 15H §36d(2); 1925, c. 88 §57.)

§58. **Death or Resignation of Mine Foreman; Successor.**—In case of the death or resignation of a mine foreman, the superintendent or manager shall appoint a certified man, if one be available; and if not, he may temporarily appoint any other competent man who may serve with the approval of the chief of the department of mines until the next examination. He shall, while acting as mine foreman, be liable to the same penalty as the mine foreman for any violations of this article. (1915, c. 10, §74; Code 1923, c. 15H, §36d(3); 1925, c. 88, §58.)

SAFETY MEASURES BY MINERS

§59. Examination by Miner of Roof and Condition of Working Place.—Every miner shall thoroughly examine the roof and general conditions of his working place before commencing work, and if he finds loose rock or other dangerous conditions, he shall not commence work in such place until it has been made safe, or unless it be for the purpose of making such place safe. (1915, c. 10, §76; Code 1923, c. 15H, §36e(1); 1925, c. 88, §60.)

§60. Props, Timbers and Cap Pieces.—Every workman in want of props, cap pieces and timbers shall notify the mine foreman, or such other persons as may be designated for that purpose, at least one day in advance, giving the approximate length and number of props or timbers and cap pieces he requires; but in case of an emergency the timbers may be ordered immediately up on discovery of any danger, and it shall be the duty of each miner to properly prop and secure his place in order to make the same secure for him to work therein. (1887, c. 50, §11; 1901, c. 106, §11; 1907, c. 7 §15; 1915, c. 10, §77; Code 1923, c. 15 §36e(1); 1925, c. 88, §61.)

§61. Motormen and Trip Riders; Duties.—Motormen and trip riders shall use ca in handling locomotives and cars. It sh be their duty to see that there is a co spicuous light on the front and rear of ea trip or train of cars when in motion. Th shall not permit any person or persons ride on locomotives or loaded cars unl granted permission by the mine forem (1915, c. 10, §82; Code 1923, c. 15 §36e(1); 1925, c. 88, §65.)

§62. **Who May Ride on Mine Car.**—No person, except the persons necessary to operate the trip or car, shall ride on any loaded car or on the outside of any car, or get on or off a car while in motion. (1915, c. 10, §81; Code 1923, c. 15H, §36e(1); 1925, c. 88, §64.)

EXPLOSIVES

§63. **Explosives; Quantity and How Taken Into Mine.**—No miner or other employee shall take into any mine in this State any larger quantity of powder or other explosive than he may reasonably expect to use in any one shift. All powder shall be carried into the mine in a metallic canister or fiber receptacle, of a capacity not to exceed five pounds, which shall be properly closed with an approved top. (1901, c. 106, §10; 1907, c. 78, §11; 1915, c. 10, §75; Code 1923, c. 15H, §36e(1); 1925, c. 88, §59.)

§64. **Same; Preparation for Shots; Hauling Explosives into Mine.**—In no case shall more than one kind of explosive be used in the same drill hole, and every blasting hole shall be tamped, except as is necessary to accomplish cushion blasting, full length the explosive to the mouth, and no coal dust or inflammable material shall be used for tamping. Cushion blasting shall not be allowed in any case unless written permission is granted by the department of mines. Dynamite shall not be used in blasting coal. No fuses shall be used unless permission is granted by the mine foreman, and in no case shall fuses be used of less length than the drill hole.

Where permissible explosives are used the detonators and explosives shall be kept separate; and no black powder, high ex-

plosives or detonators shall be hauled on any trip operated by electric haulage motors, unless inclosed in non-conducting boxes approved by the district inspector.

Trips hauling explosives shall not carry workmen other than those operating the trip, and explosives shall not be hauled into or out of the mine within five minutes proceding or following any trips in which men are handled; and when traveling with air current, the explosive trip shall precede; if against the air current, the man trip shall precede. (1915, c. 10, §80; Code 1923, c. 15H, 36e(1); 1925, c. 88, §63.)

§65. Same; Firing Shots.—No shots shall be fired in any place known to liberate explosive gas until such place has been properly examined by a competent person who is designated for that purpose, and no shots shall be fired in any place where gas is detected until such gas has been removed by means of ventilation. No person shall fire more than one shot at a time and after firing such shot he shall not return to the working place until the smoke has cleared away; and before starting work he shall make a careful examination as to the condition of the roof and do what is necessary to make the place safe before beginning to load coal. (1915, c. 10, §§79; Code 1923, c. 15H, §36e(1); 1925, c. §62.)

§66. Solid Shooting; Permit; Offense. In any mine in which solid shooting is done the district mine inspector is authorized to prescribe the condition under which such solid shooting may be done. Any operator or mine foreman who causes or permits any solid shooting to be done there without first having obtained a written

mit from the district inspector, or any miner therein who shoots coal from the solid without first having obtained permission so to do from the operator or mine foreman, shall be guilty of a misdemeanor, and, upon conviction, shall be fined as hereinafter provided. (1907, c. 78, §23; 1915, c. 10, §36; Code 1923, c. 15H, §28; 1925, c. 88, §23.)

§67. **Magazines for Storing Explosives.**—All magazines used for storing powder or other explosives in greater quantities than an estimated daily supply shall be located not less than three hundred feet from any mine opening or building used or occupied by any person or persons; and the outside construction of such magazines shall be of noncombustible material. (1915, c. 10, §45; Code 1923, c. 15H §36a(1); 1925, c. 88 §30.)

ACCIDENTS

§68. **Explosion or Accident; Investigation by Mine Inspector; Inquest.**—Whenever, by reason of any explosion or other accident in or about any coal mine, or the machinery connected therewith, loss of life or serious personal injury shall occur, it shall be the duty of the superintendent of the mine, and, in his absence, of the mine foreman in charge of the mine, to give notice forthwith to the chief of the department of mines and the inspector of the district, stating the particulars of such accident; and, if any one is killed thereby, the coroner of the county also, or in his absence or inability to act, to any justice of the peace. Such inspector shall, if he deems necessary from the facts reported, immediately go to the scene of such accident and make such suggestions and render such

assistance as he may deem necessary for the future safety of the men, and investigate the cause of such explosion or accident and make a record thereof which he shall preserve with the other records of his office; and to enable him to make such investigations, he shall have the power to compel the attendance of witnesses and to administer oaths or affirmations. The costs of such investigation shall be paid by the county in which the accident occurred in the same manner as the costs of the coroner's inquest are now paid. If the coroner or justice shall determine to hold an inquest upon the body of any person killed as aforesaid, he shall impanel a jury, no one of whom shall be directly or indirectly interested. The chief of the department of mines or the district inspector, if present at such inquest, shall have the right to appear and testify and to offer any testimony that may be relevant and to question and cross-question any witness and the coroner or justice shall deliver to the inspector a copy of the testimony and verdict of the jury. (1887, c. 50, §15; 1901, c. 78, §20; 1915, c. 10, §43; Code 1923, 15H, §35; 1925, c. 88, §28.)

§69. Written Report of Accidents.—Whenever any accident occurs in or about a coal mine to any employee or person connected with the mining operation, resulting in personal injury or death, the operator or agent shall, within twenty-four hours after the happening of such accident, report the same to the chief of the department of mines and to the district mine inspector of the district in which the accident occurred in writing, giving full details thereof upon forms prescribed and furnished by the

partment of mines. (1915, c. 10, §83; Code 1923, c. 15H, §36e(2); 1925, c. 88, §66.)

§70. Fire in or About Mine; Notification of Chief or District Mine Inspector.—The operator, agent or mine foreman shall, upon the discovery of fire in or about any mine, immediately notify the chief of the department of mines and the district mine inspector in whose district the mine is located. (1925, c. 88 §67.)

RULES AND REGULATIONS

§71. Permitting Work in Violation of Written Instructions of Mine Inspector.—Any operator, agent, superintendent or mine foreman, having in charge any mine, who shall knowingly permit any person to work in any part of a mine in violation of written instructions issued by the mine inspector, made in compliance with the requirements of this article, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined as hereinafter provided. (1907, c. 78, §22; 1915, c. 10, §35; Code 1923, c. 15H, §27; 1925, c. 88, §68.)

§72. Special Rules by Operator; Effect.—The operator of every mine in this State shall adopt special rules for the government and operation of his mine or mines, covering all the work pertaining thereto and outside of the same, which, however, shall not be in conflict with the provisions of the mining laws of this State. Such rules, when established, shall be printed on cardboard, in the language spoken by ten or more employees, and shall be posted in the drum house, tipple or some other conspicuous place about the mines where the same may be seen and observed by all employees at such mines. When such rules

are so posted, they shall operate as a notice to all employees at such mine of their acceptance of the contents thereof. It shall be the duty of each mine operator to furnish a printed copy of such rules to each of his employees when requested by either or any of them. (1901, c. 106, §20; 1907, c. 78, §25; 1915, c. 10, §38; Code 1923, c. 15H, §30; 1925, c. 88, §25.)

WEIGHING AND MEASURING COAL.

§73. Weighing and Measuring Coal; Appliances; Testing Correctness Thereof.—It shall be the duty of every corporation, company or person engaged in the business of mining and selling coal by weight or measure, to procure and constantly keep on hand, at the proper place, the necessary scales and measures and whatever else may be necessary to correctly weigh and measure the coal as mined by such corporation, company or person.

It shall be the duty of the sealer of weights and measures for every county in which coal is so mined and sold to visit each coal mine operated therein, and where such scales and measures are kept, at least once in each year, and test the correctness of such scales, and measures. The owner or operator of such coal mine, or any two or more of the miners working therein, may in writing require his attendance at the place where such scales and measures are kept at other times, in order to test the correctness thereof, and it shall be his duty to comply with such requests as soon as he can after receiving the same.

If in any such county there be no sealer of weights and measures, the duties hereby required to be done and performed by such

sealer shall be done and performed by the inspector of mines for the district of which such county forms a part. In any county in which the mine inspector is required so to act, the county court of such county shall furnish him with whatever is necessary to enable him to discharge his duties, if such court has procured the weights and measures and balances provided for by article one, chapter forty-seven of this Code; and if not, the state sealer of weights and measures shall furnish him with whatever may be necessary to enable him to discharge the duties required of him. The things so furnished him, in either case, shall be returned by him to the person from whom he received them as soon as possible after he has performed the duties for which he received them. It shall be the duty of every corporation, company or person so engaged in the business of mining coal to procure and constantly keep on hand a sealed weight of at least fifty pounds and a sealed measure of at least one bushel, to be used for the purposes herein set forth. (1891, c. 82, §§1, 5; Code 1923, c. 15H, §§47, 51.)

§74. **Marking and Weighing Car Used in Hauling Coal.**—Each car used by any such corporation, company or person in removing coal from any coal mine shall be numbered by consecutive numbers plainly painted, and placed and kept thereon as long as such car is so used. And if the miners from such mine is mined, and the miners are paid according to the weight thereof for mining the same, every such car so used shall be weighed upon such standard scales, and the weight thereof shall be plainly marked and placed thereon as long as such car shall be used as aforesaid. The coal at any such mine is mined, and

the miners thereof are paid for mining the same by measure, the number of bushels of coal such car will hold when loaded to its capacity shall also be plainly marked, and placed and kept thereon as long as such car is so used as aforesaid. And no car shall be used for the purpose aforesaid until the provisions of this section are complied with. (1891, c. 82, §2; Code 1923, c. 15H, §48.)

§75. Weighing Coal in Car Before Screening; Payment for Coal.—All coal so mined and paid for by weight shall be weighed in the car in which it is removed from the mine before it is screened, and shall be paid for according to the weight so ascertained, at such price per ton as may be agreed on by such owner or operator and the miners who mined the same. And coal mined and paid for by measure shall be paid for according to the number of bushels marked upon each car in which it is removed from the mine, and before it is screened, and the price paid for each bushel so ascertained shall be such as may be agreed on as aforesaid. (1891, c. 82, §3; Code 1923, c. 15H, §49.)

§76. Weighman; Checkweighman; Employment; Oath.—Every such corporation company or person shall employ a weighman, and the miners working in any such coal mine may employ a checkweighman as provided in section eight, article five, chapter twenty-one of this Code, and the two so employed shall supervise the weighing of each car while empty, and the weighing of the same when loaded with coal so paid for by weight, and the measuring of the number of bushels therein, when necessary, so paid for by measure. Where such check

weighman is employed by the miners working at such mine, the corporation, company or person operating the same shall furnish such checkweighman with a check or number and pay him for all coal placed to his check or number the same per ton as is paid to the miners. If the miners fail to employ such checkweighman, then the person so employed by such corporation, company or person shall perform that duty. Each of the persons so employed, before entering upon the discharge of the duties of his employment, shall take and subscribe an oath or affirmation that he will honestly and impartially do and perform the duties of his employment, and do equal and exact justice between employers and employees interested in the matter of his employment, to the best of his judgment, skill and ability.

Where the weighman is mutually selected by the consent of a majority of the miners working in any mine and the operator or agent of said company, it shall not be considered necessary to employ a checkweighman, but at any time that either of the parties to said agreement shall become dissatisfied with said weighman, they may discharge him on ten days' notice, or the miners may employ a checkweighman. (1891, c. 214; 1901, c. 20 §§2, 4; Code 1923, c. 45, §§50, 56, 58.)

[illegible]. Offenses and Penalties Relative to Weighing and Measuring.—Any corporation, company or person violating any of the provisions of the four next preceding sections shall be guilty of a misdemeanor, and upon conviction thereof, shall, for each offense, be fined not less than twenty-five

the officer, agent or employee of the corporation or company whose duty it was to do or perform the act, or cause it to be done and performed, which is the subject of the indictment, may be indicted jointly with the corporation or company, and upon conviction thereof, in the discretion of the court, he may be imprisoned in the county jail not less than ten nor more than sixty days. (1891, c. 82, §6; Code 1923, c. 15H §52.)

§78. Mines Subject to Weighing and Measuring Provisions.—None of the provisions of the five next preceding sections, except those relating to checkweighmen, shall apply to any corporation, company or person owning or operating a coal mine in which fewer than ten miners are employed. (1891, c. 82, §7; Code 1923, c. 15H, §53.)

GENERAL PROVISIONS

§79. Drainage From Mine to be Free From Pollution.—Every mine and coal wash-ery from which water is discharged or drained into any stream, watercourse or water in this State shall be kept in a sanitary condition, and such water, while in the mine and on the premises of the mine owner or operator, shall be kept free from pollution by human or animal excrement or substance deleterious to health. The state department of health, its agents or employees, shall, at all seasonable times, have authority to enter upon the premises and into any such mine in order to see that the same is kept in a sanitary condition and that the waters draining therefrom are free from such objectionable substance; and the state department of health shall have authority to prevent any mine owner or

operator who fails to comply with the provisions of this section from draining or discharging water from his or its mine into any stream, watercourse or water in this State. (1915, 2nd Ex. Sess., 3. 5; 1921, c. 116, §20; Code 1923, c. 62, §20; 1929, c. 13, §69.)

§80. **Intimidation of Workmen.**—No person or persons, or combination of persons shall by force, threats, meanaces or intimidations of any kind, prevent or attempt to prevent from working in or about any mine any person or persons who have the lawful right to work in or about the same, and who desire so to work; but this provision shall not be so construed as to prevent any two or more persons from associating together under the name of knights of labor, or any other name they may desire, for any lawful purpose, or for using moral suasion or lawful argument to induce any one not to work in and about any mine. (1887, c. 50, §14; 1890, c. 9, §14; 1907, c. 78 §19; 1915, c. 10, §1; Code 1923, c. 15H, §34; 1925, c. 88.)

§81. **Annual Report by Operator of Mine; Owner's Report in Case of Sale.**—The operator or agent of every coal mine shall annually, during the month of January, mail or deliver to the chief of the department of mines a report for the preceding twelve months, ending with the thirty-first day of December. Such report shall state the names of the operators and officers of the mine, the quantity of coal mined, and such other information, not of a private nature, as may from time to time be required by the chief of the department of mines. Blank forms of such reports shall be furnished by the chief of the department of mines. When-

ever any person, company or corporation operating a coal mine shall transfer the ownership of any mine to another person, company or corporation, the person, company or corporation transferring such ownership shall, within thirty days make a report to the chief of the department of mines of such change, and a statement of the tons of coal produced since the first of January last previous to the date of such sale or transfer of such mine or mines. (1887, c. 50, §16; 1907, c. 78, §21; 1915, c. 10, §34; Code 1923, c. 15H, §26; 1925, c. 88, §22.)

§82. Offenses; Penalties; Jurisdiction.—Any inspector, person, company or corporation, or any mine superintendent, manager, engineer, mine foreman, agent or employee, who is charged with the making of maps or other data to be furnished the department of mines, as provided in sections two and three of this article, and who does not correctly show the data required, or knowingly makes any false statement or return in connection therewith, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than fifty nor more than two hundred dollars, in the discretion of the court.

Any chief of the department of mines, any mine inspector, or any operator, mine superintendent, general manager, mine foreman, or other employee of any coal company, or any other person, who violates any of the provisions contained in sections four to eighty-one, inclusive, of this article, shall be guilty of a misdemeanor and, upon conviction thereof, shall, unless a different penalty is expressly provided, be fined not less than ten nor more than five hundred dollars, or be imprisoned in the county

not less than ten days nor more than one year, in the discretion of the court.

In all prosecutions under this article, the circuit court, criminal court, intermediate court having criminal jurisdiction, and justices of the peace, shall have concurrent jurisdiction, with the right of appeal. (1907, c. 78, §26; 1915, c. 10 §87; Code 1923, c. 15H, §36e(5); 1925, c. 88, §71.)

Section 83. Each mine locomotive shall be equipped at all times with a lifting jack and handle.

ARTICLE 3. Sand and Clay Mines, Quarries and Cement Works.

Sec.

1. Inspector.
2. Mining laws applicable.

§1. **Inspector.**—The chief of the department of mines shall, with the consent of the governor, appoint an inspector of sand mines, sand pits, clay mines, clay pits, quarries and cement works, in addition to the district mine inspectors now provided for by law. Such inspector shall be a man who has had practical experience in the operation of sand mines, sand pits, clay mines, clay pits, crushers and quarries and in the use of explosives in sand mining and quarrying operations. Such inspector shall rank as a mine inspector, shall receive the compensation provided for mine inspectors, and shall be subject to all the requirements of sections eight and nine of article one of this chapter, except that such inspector shall not be required to have the knowledge and experience in coal mining operations required of mine inspectors. (1917, c. 20, §1; Code 1923, c. 15H, §94.)

§2. **Mining Laws Applicable.**—All provisions of the mining laws of this State intended to safeguard life and property shall

extend to the operation of sand mines, sand pits, clay mines, clay pits, quarries and cement works, in so far as such laws are applicable thereto; and the chief of the department of mines shall make and enforce under said laws such rules and regulations as may be necessary to secure safe and sanitary working conditions in such sand mines, sand pits, clay mines, clay pits, quarries and cement works. (1917, c. 20 §2; Code 1923, c. 15H, §95.)

ARTICLE 4. Oil and Gas Wells.

Sec.

1. Definitions.
2. When well operator to file plat as prerequisite to drilling; contents notice.
3. Drilling permit; agreed location of well; location fixed by department of mines; exceptions thereto; docket of proceedings.
4. Appeal by coal operator or well operator from location fixed or approved by department of mines; procedure.
5. Protective devices when well penetrates workable coal bed.
6. Protective devices when gas is found beneath or between workable coal beds.
7. Continuance of such protective devices during life of well.
8. Protective devices when well is drilled through horizon of coal bed from which coal has been removed.
9. Plugging and abandonment of well; notice of intention; affidavit, showing time and manner.
10. Methods of plugging well.

11. When coal operator to file maps and plans as prerequisite to extension of coal operations; petition for leave to conduct operations within two hundred feet of well; proceedings thereon.
12. Supervision by department of mines over drilling and mining operations; complaints; hearings; appeals.
13. Rules and regulations; hearing before department of mines; appeals.
14. Preventing waste of gas.
15. Right of adjacent owner or operator to prevent such waste; recovery of cost.
16. Restraining waste.
17. Offenses; penalties.

§1. **Definitions.**—The term "well," when ed in this article, means a bore hole lled or proposed to be drilled for the rpose of producing natural gas or petro-m, or through which natural gas or petro-m is being produced; the term "owner," n used with reference to any such l, shall include any person or per-, firm, partnership, partnership asso-ion or corporation that owns, manages, rates, controls or possesses such well rincipal, or as lessee or contractor, ployee or agent of such principal; the "well operator" shall include any per- or persons, firm, partnership, partner-association or corporation that pro- to or does locate, drill, operate or ion any well as herein defined; the "coal operator" shall include any per- or persons, firm, partnership, part-p association or corporation that es to or does operate a coal the term "department" or "depart-f mines" includes the duly constituted

authorities under the laws of this State having jurisdiction over coal mining operations; the term "plat" means a map, drawing or print showing the location of a well or wells as herein defined; the term "casing" means a string or strings of pipe commonly placed in wells drilled for natural gas and petroleum; the terms "oil" and "gas" are synonyms for petroleum and natural gas respectfully; the term "cement" means hydraulic cement properly mixed with water only; the term "workable coal bed" means a coal bed in fact being operated commercially, or which, in the judgment of the department of mines, can, and that it is reasonably to be expected will, be so operated, and which when operated, will require protection, if wells are drilled through it. (1897, c. 58 §5; Code 1923, c. 62D, §5; 1929, c. 86, §1.

§2. When Well Operator to File Plat a Prequisite to Drilling; Contents; Notice.— Before drilling for oil or gas on any trac of land known to be underlaid with one o more workable beds of coal, the well ope ator shall have a plat prepared by a com petent engineer showing the district an county in which the tract of land is locate the name and acreage of the same, t names of the owners of adjacent tracts, t proposed location of the well determin by survey, the courses and distances such location from two permanent poi or landmarks on said tract and the numb to be given the well, and shall forwa by registered mail a copy of the plat the department of mines and copies to e and every coal operator, if any, operat said beds of coal beneath said tract land, or within five hundred feet of

boundaries of the same, who has mapped the same and filed his maps as required by law. With each of such plats there shall be enclosed a notice (form for which shall be furnished on request by the department of mines) addressed to the department of mines and to each such coal operator at their respective addresses, informing them that such plat and notice are being mailed to them respectively by registered mail, pursuant to the requirements of this article. If no objections are made to such proposed location within ten days from receipt of such plat and notice by the department of mines, the same shall be filed and become a permanent record of such location, subject to inspection at any time by any interested person. The notice above provided for may be given to the coal operator by delivering or mailing it as above to any agent or superintendent in actual charge of mines. (1929, c. 86, §2.)

g. Drilling Permit; Agreed Location of Well; Location Fixed by Department of Mines; Exceptions Thereto; Docket of Proceedings.—In case any such location is made on or in close proximity to any mine opening or shaft, entry, traveling, air, haulway, drainage or other passage-way, or to any proposed extension thereof, in any operated or abandoned or operating coal mine, or coal mine already surveyed and platted, but not yet being operated, so that the well or pillar of coal about the well necessary to the protection of the mine and of the well itself when drilled will interfere with or endanger the use of such mine shaft, entries or ways, then the coal operator or operators affected may, and shall, before drilling of a well at such proposed

location will cause a dangerous condition in their mine or mines, within ten days from the receipt of such plat or notice by the department of mines, file objections in writing (forms for which will be furnished by the department on request) to such proposed location with the department of mines, setting out therein as definitely as is reasonably possible the ground or grounds on which such objections are based and indicating the direction and distance from the location shown the proposed well should be drilled to overcome such objections. If no such objections be filed, or be found, by the department of mines, within said period of ten days, to such proposed location, the department shall forthwith issue to the well operator a drilling permit reciting the filing of such plat, that no objections have been made by the coal operators to the location, or found thereon by the department, and that the same is approved and the well operator authorized to proceed to drill at such location.

If any objection or objections are so filed by any coal operator or are made by the department of mines, the department shall notify the well operator of the character of the objections and by whom made and fix a time and place, not less than ten days from the end of said ten day period, at which such objections will be considered, of which time and place the well operator and all coal operators to whom a copy of such plat was mailed, whether objecting or not objecting to the proposed location, shall be given at least five days written notice by the department, by registered mail, and summoned to appear, bringing with them their maps and plans and

their mines and mine workings and pre-
ared to approve or to except to such lo-
ation or locations as the department may,
fter hearing, approve or itself fix in case
o agreement is reached. At the time and
lace so fixed the well operator and the
al operators, or such of them as are
esent or represented, shall proceed to
onsider the objections and to agree upon
ther the location as made or so moved
o satisfy all objections and meet the
pproval of the department, and any change
f the original location so agreed upon and
pproved by the department shall be in-
icated on said plat on file with the de-
artment, and the distance and direction of
he new location from the original location
all be shown, and, as so altered, the plat
hall be filed and become a permanent rec-
rd. Whereupon the department shall forth-
ith issue to the well operator a drilling
ermit reciting the filing of said plat, that
fter hearing duly held a location as shown
hereon was agreed upon and approved,
nd that the well operator is authorized to
rill at such location.

In case the well operator and the coal
perator or such of the coal operators as
re present or represented at such hearing
re unable to agree upon a location, or up-
n a location that meets the approval of
he department of mines, then the depart-
ent shall fix a location on such tract of
and near to the original location as
an be in a pillar of suitable size, through
hich the well can be drilled safely, tak-
ng into consideration the dangers from
ump, squeeze, or other disturbance, due
o the extraction of coal. Should no such pil-
ar exist, however, the well may be locate l

and drilled through open workings where, in the judgment of the department of mines, it is practicable and safe so to do, taking into consideration the dangers from creeps, squeezes or other disturbances. Such new location shall be indicated on the plat on file with the department as provided in the next preceeding paragraph of this section, and the department shall forthwith tender to the well operator a permit to drill at such location, which permit the well operator may accept or refuse to accept, and if it accepts such drilling permit, the coal operator or operators having filed objections and appearing or being represented at such hearing, may except to such location and to the issue of such drilling permit and the well operator accepting the same may require the record of the hearing to show that it accepts such drilling permit at the location made by the department as a new or additional location and not in lieu of its original location, and that it reserves the right to appeal to the circuit court of the county in which its original location lies for relief, and that it excepts to the refusal of the department to approve such original location substantially as made.

The department of mines shall number and keep an index of and docket each case and notice mailed to it as provided in section two of this article, entering in the docket the name of the well operator, names of the coal operators notified and their addresses, the date of receipt of any such notice and of all objections filed, dates of hearings and all actions taken by the department, permits issued or refused, which docket shall be open to inspection by the public, and, together with the papers

shall constitute the record of each such proceeding before the department. (1929, c. 86, §3.)

§4. Appeal by Coal Operator or Well Operator From Location Fixed or Approved by Department of Mines; Procedure.—Any coal operator excepting to any locating fixed or approved by the department of mines or to the issuance of any drilling permit, and any well operator excepting to the refusal of the department to grant a drilling permit to the location shown in the plat mailed to the department as provided in section two of this article, or such location so shifted as to be still substantially the same or the equivalent thereof, may at any time within ten days of the taking of such action by the department of mines appeal to the circuit court of the county in which the location involved lies. The procedure shall be by petition and answer, duly verified, and naming the department as one of the respondents. There shall be attached to the petition or filed therewith a transcript of the record before the department and copies of all papers filed, and the petition shall briefly set forth the matter in controversy, the ruling of the department and the relief sought. The respondents shall be required to answer under oath within ten days after service of copies of the petition upon them, and the procedure shall be expediated, as far as is reasonably possible, having regard to possible drainage loss of title by the well operator through failure to complete a well within the period fixed by the terms of the lease under which it holds. The court may, by preliminary order, upon proper proof of the necessity therefor and the giving of proper

security, stay the drilling of any well until a final decision on the appeal, and after a final hearing, at which any competent and relevant evidence may be introduced, may set aside any action or order of the department and enter such final order and decree as in its judgment is just and right and will best carry out the provisions of this article. From such final orders and decrees of the circuit court an appeal may be taken to the supreme court of appeals as now provided by law in proceedings in equity.. During vacation periods or when for any reason the circuit court is not in session, such proceedings shall be before the judge of such court in vacation, or in his absence, before the judge of an adjoining circuit, who may act until the return of the regular judge to his circuit whereupon all further proceedings shall be had before the regular judge or circuit court having initial jurisdiction therein, and all proceedings in vacation shall be of like force and effect as if before the court in session. (1929, c. 86, §4.)

§5. **Protective Devices When Well Penetrates Workable Coal Bed.**—A well penetrating one or more workable coal beds shall be drilled to such depth, and of such size, as will permit the placing of casing and packers in the hole at such point and in such manner as will exclude all water, gas or gas pressure from the coal bed, except such as may be found in the coal itself. Each string of casing run in the hole shall be provided with a steel casing shoe or collar firmly fixed on the bottom of the string of casing. Each string of casing run through a workable bed of coal shall be seated, at least thirty feet, be

such coal bed, in twenty feet of cement, mud, clay or such other nonporous material as will make an effective seal. And after any such string of casing has been so seated, drilling may proceed forthwith to any required depth. (1929, c. 86, §5.)

§6. **Protective Devices When Gas is Found Beneath or Between Workable Coal Beds.**—In the event that gas is found beneath a workable coal bed before the hole has been reduced from the size it had at the coal bed, a packer shall be placed below the coal bed, and above the gas horizon, and the gas by this means diverted to the inside of the adjacent string of casing through perforations made in such casing, and through it passed to the surface without contact with the coal bed. Should gas be found between two workable beds of coal, in a hole, of the same diameter from bed to bed, two packers shall be placed, with perforations in the casing between them, permitting the gas to pass to the surface inside the adjacent casing. In either of the cases here specified, the strings of casing shall extend from their seats to the top of the well. (1929, c. 86, §6.)

§7. **Continuance of Such Protective Devices During Life of Well.**—In the event that a well becomes productive of natural gas or petroleum, all coal-protecting strings of casing shall remain in place during the life of the well. During the life of the well the annular spaces between the various strings of casing adjacent to workable beds of coal shall be kept open, and the top ends of such strings shall be provided with casing heads, or such other suitable devices as will permit the free passage of

gas and prevent filling of such annular spaces with dirt or debris. (1929, c. 86, §7.)

§8. Protective Devices When Well is Drilled Through Horizon of Coal Bed From Which Coal Has Been Removed.—When a well is drilled through the horizon of a coal bed from which the coal has been removed, the hole shall be drilled at least thirty feet below the coal bed, of a size sufficient to permit the placing of a liner which shall start not less than twenty feet beneath the horizon of the coal bed and extend not less than twenty feet above it. Within this liner, which may be welded to the casing to be used, shall be centrally placed the largest sized casing to be used in the well and the space between the liner and casing shall be filled with cement as they are lowered into the hole. Cement shall be placed in the bottom of the hole to a depth of twenty feet to form a sealed seat for both liner and casing. Following the setting of the liner, drilling shall proceed in the manner provided above. Should it be found necessary to drill through the horizon of two or more workable coal beds from which the coal has been removed such liner shall be started not less than twenty feet below the lowest such horizon penetrated and shall extend to a point not less than twenty feet above the highest such horizon. (1929, c. 86, §8.)

§9. Plugging and Abandonment of Wells; Notice of Intention; Affidavit Showing Time and Manner.—Prior to the abandonment of any well, the well operator shall notify, by registered mail, the coal operator or operators to whom notices are required to be given by section two of this atricle, and the department of mines, of its intention

to plug and abandon any such well (using such form of notice as the department may provide), giving the number of the well and its location and fixing the time at which the work of plugging and filling will be commenced, which time shall be not less than five days after the day on which such notice so mailed is received or in due course should be received by the department of mines, in order that a representative or representatives of the coal operator and of the department, or of both, may be present at the plugging and filling of the well. Whether such representatives appear or do not appear, the well operator may proceed at the time fixed to plug and fill the well in the manner hereinafter described. When such plugging and filling have been completed, an affidavit, in triplicate, shall be made (on a form to be furnished by the department) by two experienced men who participated in the work, in which affidavit shall be set forth the time and manner in which the well was plugged and filled. One copy of this affidavit shall be signed by the well operator, another (or copies of same) shall be mailed to the coal operator or operators, and the third to the department of mines. (1929, c. §9.)

Methods of Plugging Well.—Upon the abandonment or cessation of the operation of any well drilled for natural gas or petroleum, the well operator, at the time of such abandonment, or cessation, shall fill and plug the well in the following manner:

Where the well does not penetrate any workable coal beds, it shall either be filled with sand, clay or other nonporous material from the bottom of the well to a point

twenty feet above the top of its lowest oil gas or water-bearing stratum; or a per nanent bridge shall be anchored thirty fe below its lowest oil, gas or water-bearin stratum, and from such bridge it shall b filled with mud, clay or other nonporo material to a point twenty feet above suc stratum; at this point there shall be plac a plug of cement or other suitable mater which will completely seal the hole. B tween this sealing plug and a point twe feet above the next higher oil, gas or wat bearing stratum, the hole shall either filled, or bridged and filled, in the man just described; and at such point th shall be placed another plug of cement other suitable material which will compl ly seal the hole. In like manner the h shall be filled and plugged, or bridg filled and plugged with reference to e of its oil, gas or water-bearing strata. H ever, whenever such strata are not w separated and are free from water, t may be grouped and treated as a si sand, gas or petroleum horizon, and aforesaid filling and plugging be perfo as though there were but one horizon. ter the plugging of all oil, gas or w bearing strata, as aforesaid, a final shall be anchored approximately ten below the bottom of the largest casing the well; from this point to the surfac well shall be filled with mud, clay or nonporous material. In case any oi oil or gas-bearing strata in a well shall been shot, thereby creating cavities can not readily be filled in the manner described, the well operator shall follow er of the following methods:

(1) Should the stratum which has shot be the lowest one in the well,

shall be placed, at the nearest suitable point, but not less than twenty feet above the stratum, a plug of cement or other suitable material which will completely seal the hole. In the event, however, that the shooting has been done above one or more oil or gas-bearing starata in the well, plugging in the manner specified shall be done at the nearest suitable points, but not less than twenty feet below and above the stratum shot. (2), when such cavity shall be in the lowest oil or gas-bearing stratum in the well, a liner shall be placed which shall extend from below the stratum to a suitable point, but not less than twenty feet above the stratum in which shooting has been done. In the event, however, that the shooting has been done above one or more oil or gas-bearing strata in the well, the liner shall be so placed that it will extend not less than twenty feet above, nor less than twenty feet below the stratum in which shooting has been done. Following the placing of the liner in the manner here specified, it shall be completely filled with cement, mud, clay or other porous sealing material:

(1) Where the well has penetrated one or more workable coal beds, it shall be filled and securely plugged in the manner aforesaid, to a point forty feet below the lowest workable coal bed. If, in the judgment of the well operator, the coal operator and the department of mines, a permanent outlet to the surface is required, such outlet shall be provided in the following manner: A plug of cement, or other suitable material, shall be placed in the well at a suitable point, not less than thirty feet below the lowest workable coal bed. In this well and passing through the center of it

shall be securely fastened an open pipe not less than two inches in diameter, which shall extend to the surface. At or about the surface the pipe shall be provided with a device which will permit the free passabe of gas, and prevent obstruction of the same. Following the setting of the cement plug and outlet pipe as aforesaid, the hole shall be filled with cement to a point twenty feet above the lowest workable coal bed. From this point the hole shall be filled with mud clay or other nonporous material to a point thirty feet beneath the next overlying workable coal bed, if such there be, and the next succeeding fifty feet of the hole filled with cement, and similarly, in case there are more overlying workable coal beds. If, in the judgment of the well operator, the coal operator and the department of mines, no outlet to the surface is considered necessary, the plugging, filling and cementing shall be as last above described. (1891, c. 106, §2; 1897, c. 58 §2; Code 1923, c. 62, §2; 1929, c. 86, §10.)

§11. When Coal Operator to File Maps and Plans as Prerequisite to Extension of Coal Operations; Petition for Leave to Conduct Operations Within Two Hundred Feet of Well; Proceedings Thereon.—Before he after removing any coal or other material or driving any entry or passageway within less than five hundred feet of any well, or also before hereafter extending the workings in any coal mine beneath any tract of land on which wells are already drilled or within five hundred feet of any well under any tract of land in visible possession by a well operator for the purpose of drilling for oil or gas, the coal operator shall forward, by registered mail, to,

file a copy of the parts of its maps and plans which it is required by law to prepare and file and bring to date from time to time, showing its mine workings and projected mine workings beneath such tract of land and within five hundred feet of the outer boundaries thereof, simultaneously, with the well operator and the department of mines, accompanying each of said copies with a notice (form of which shall be furnished on request by the department of mines), addressed to the well operator and to the department of mines at their respective addresses, informing them that such plans or maps and notice are being mailed by registered mail to them, or are being filed and served upon them, respectively, pursuant to the requirements of section eleven of this article. Following the filing of such parts of said plans or maps as aforesaid, the coal operator may proceed with its mining operations in the manner and as projected on such plans or maps, but shall not remove any coal or other material or cut any passageway nearer than two hundred feet of any completed well, or well that is being drilled, or for the purpose of drilling which a derrick is being constructed, without the consent of the department of mines, and the coal operator shall, at least every six months, bring such plans or maps so filed with the department up to date, or file new plans and maps complete to date.

Application may be made at any time to the department of mines by the coal operator for leave to mine or remove coal or conduct its mining operations within two hundred feet of any well, by petition, duly verified, showing the location of the well, the workings adjacent to the well and any other

material facts, and what further mining operations within two hundred feet of the well are contemplated, and praying the approval of the same by the department, and naming the well operator as a respondent. The coal operator shall file such petition with, or mail the same by registered mail to, the department and shall at the same time serve upon or mail by registered mail a true copy to the well operator. The department of mines shall, forthwith upon receipt of such copy, notify the well operator that it may answer the petition within five days, and that in default of an answer the department may approve the proposed operations as requested if it be shown by the petitioner or otherwise to the satisfaction of the department that such operations are in accordance with law and with the provisions of this article. After the expiration of such five-day period, the department, whether an answer be filed or not filed, shall fix a time and place of hearing within ten days, of which it shall give the coal operator and the well operator ten days' written notice by registered mail, and after a full hearing, at which the well operator and coal operator, as well as the department of mines, shall be permitted to offer any competent and relevant evidence, the department shall grant the request of the coal operator or refuse to grant the same or make such other decision with respect to such proposed further operations in the vicinity of any such well as in its judgment is just and reasonable under all the circumstances and in accordance with law and the provisions of this article. The department of mines shall docket and keep a record of all such proceedings substantially as required in the last paragraph of section three of this article. Appeals from any such final decision or order of

department of mines, either the well operator or coal operator, or both, may, within ten days, appeal to the circuit court of the county in which the well about which approval of such further operations is involved is located. The procedure in the circuit court shall be substantially as provided in section four, the department being named as a respondent. From any final order or decree of the circuit court, an appeal may be taken to the supreme court of appeals as heretofore provided. (1929, c. 86, §11.)

§12. Supervision by Department of Mines over Drilling and Mining Operations; Complaints; Hearings; Appeals.—The department shall exercise supervision over the drilling, casing, plugging and filling of all wells and all mining operations in close proximity to any well and shall have such access to the records, maps and other records and to the properties of the well operators and coal operators as may be necessary or proper for such purpose, and, either as the result of its own investigations or pursuant to charges received by any well operator or coal operator, the department may itself enter, or shall permit any aggrieved person to file before it, a written complaint charging any well operator with not drilling or casing, or not plugging or filling, any well in accordance with the provisions of this article, or charging any coal operator with conducting mining operations in proximity to any well contrary to the provisions of this article, or to the order of the department. True copies of any such complaints shall be served upon or mailed by registered mail to any person so charged, with notice of the time and place of hearing, of which the person or operators so charged shall be given at least five days' notice. At the time

and place fixed for hearing, full opportunity shall be given any person so charged or complaining to be heard and to offer such evidence as desired, and after a full hearing, at which the department may offer in evidence the results of such investigations as it may have made, the department shall make its findings of fact and enter such order as in its judgment is just and right and necessary to secure the proper administration of this article, and, if it deems necessary, restraining the well operator from continuing to drill or case any well or from further plugging or filling the same, except under such conditions as the department may impose in order to insure a strict compliance with the provisions of this article relating to such matters, or restaining further mining operations in proximity to any well, except under such conitions as the department may impose. From any such order an appeal, naming the department as a respondent, may be taken by the operator or operators so restrained, within ten days from notice of entry of the same, to the circuit court of the county in which the well involved is located, and the department or complainant or complainants, or both, may in case such order is disobeyed, apply at any time to such circuit court for a decree enforcing the same. (1929, c. 86, §12.)

§13. Rules and Regulations; Hearings before Department of Mines; Appeals.—The department shall prescribe rules of procedure and for offering evidence in all matters brought before it, and shall prepare and, on request, furnish to applicants copies of forms of notices and of other forms that the department may require to be used, and prescrib the manner of serving the same. The department may also promulgate such

rules and regulations as it may deen necessary or helpful in securing uniformity of procedure in the administration of this article. Any matter in controversy before the department shall, after hearing or hearings, of which all persons interested have had due notice and at which they have been given an opportunity to appear and be heard and to offer evidence and to make argument by counsel if desired, decided by the department as may seem to to be just and reasonable and necessary or sirable for the proper enforcement of the ovisions of this article.

Whether or not it be so expressly stated, appeal from any final decision or action the department in administering the provns of this article may be taken by any rieved person within ten days of notice of action or decision, to the circuit court of county in which the subject matter of decision or action is located, and in all s of appeals to the circuit court, that t shall certify its decisions to the depart- t of mines, and from all such final decis- an appeal shall lie to the supreme court ppeals as now provided by law in cases in y. Any party feeling aggrieved by the order of the circuit court affecting him may present his or its petition in writing e supreme court of appeals, or to a judge f in vacation, within twenty days after ntry of such order, praying for the sus- n or modification of such final order. appliant shall deliver a copy of such n to the department of mines and to er parties of record, before presenting me to the court or judge. The court or shall fix a time for the hearing on the ion, but such hearing shall not be

held sooner than seven days, unless by agree
ment of the parties, after its presentation, an
notice of the time and place of such hearin
shall be forthwith given to the department o
mines and to all other parties of record. If th
court or judge, after such hearing, be of opi
ion that such final order should be suspende
or modified, the court or the judge may r
quire bond, upon such conditions and in su
penalty, and impose such terms and conditio
upon the petitioner as are just and reasonab
For such hearing the entire record before t
circuit court, or a certified copy thereof, sh
be filed in the supreme court, and that cou
upon such papers, shall promptly decide
matter in controversy as may seem to it to
just and right, and may award costs in e
(1929, c. 86, §13.)

§14. **Preventing Waste of Gas.**—Nat
gas shall not be permitted to waste or esc
from any well or pipe line, when it is reas
ably possible to prevent such waste, after
owner or operator of such gas, or well, or
line, has had a reasonable length of tim
shut in such gas in the well, or make the
repairs to such well or pipe line to
waste: **Provided, however,** That
, in the process of drilling a well for o
gas, or both, gas is found in such well, an
owner or operator thereof desires to con
to search for oil or gas, or both, by dr
deeper in search of lower oil or gas-be
strata, or (b) if it becomes necessary to
repairs to any well producing gas, com
known as "cleaning out," and if in
event it is necessary for the gas in suc
to escape therefrom during the proce
drilling or making repairs, as the case m
then the owner or operator of such wel

rosecute such drilling or repairs with reason-
ble diligence, so that the waste of gas from
e well shall not continue longer than reason-
ly necessary, and if, during the progress of
ch deeper drilling or repairs, any temporary
spension thereof becomes necessary, the
ner or operator of such well shall use all
sonable means to shut in the gas and pre-
t its waste during such temporary supen-
n: **Provided further,** That in all cases
re both oil and gas are found and
duced from the same oil and gas-bear-
statum, and where it is necessary for
gas therefrom to waste in the process of
ducing the oil, th owner or operator shall
all reasonable diligence to conserve and
from waste so much of such gas as it
reasonably possible to save. (1891, c.
§1; 1897, c. 58, §3; Code 1923, c.
, §3.)

5. **Right of Adjacent Owner or Operator revent such Waste; Recovery of Cost.** the owner or operator of any such well neglect or refuse to drill, case and equip, g and abandon, or shut in and conserve waste the gas produced thereform, as red to be done and performed by the ding sections of this article for a period enty days after a written notice so to ich notice may be served personally up- owner or operator, or may be posted nspicuous place at or near the well, it e lawful for the owner or operator of djacent or neighboring lands to enter e premises where such well is situated operly case and equip such well, or, in e well is to be abandoned, to properly d abandon it, or in case the well is gas, to properly shut it in and make

such needed repairs to the well to prevent th
waste of gas, in the manner required to b
done by the preceding sections of this article
and the reasonable cost and expense incurre
by an owner or operator in so doing shall b
paid by the owner or operator of such we
and may be recovered as debts of like amou
are by law recoverable. (1891, c. 106, §§4,
1897, c. 58, §4; Code 1923, c. 62D, §7.)

§16. Restraining Waste.—Aside from a
in addition to the imposition of any penalti
under this article, it shall be the duty of a
circuit court in the exercise of its equitab
jurisdiction to hear and determine any bill
bills in equity which may be filed to restr
the waste of natural gas in violation of t
article, and to grant relief by injunction
by other decrees or orders, in accordance w
the principles and practice in equity. T
plaintiff in such bill shall have sufficie
standing to maintain the same if he shall a
and prove that he is interested in the la
situated within the distance of one mile fr
such well, either as an owner of such la
or of the oil or gas, or both, thereunder
fee simple, or as an owner of leases ther
or of rights therein for the production of
and gas or either of them. (1897, c. 58,
Code 1923, c. 62D, §7.)

§17. Offenses; Penalties.—Any perso
persons, firm, partnership, partnership
sociation or corporation willfully viol
any of the provisions of this article which
scribe the manner of drilling and casin
plugging and filling any well, or which
scribe the methods of conserving gas
waste, or which fix the distance from

within which mining operations shall not be conducted without the approval of the department, or violating the terms of any order of the department allowing mining operations within a lesser distance of any well than that prescribed by the article, shall be guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine not exceeding two thousand dollars, or imprisonment in jail for not exceeding twelve months, or both, in the discretion of the court, and prosecutions under this section may be brought in the name of the State of West Virginia in the court exercising criminal jurisdiction in the county in which the violation of such provisions of the article or terms of such order was committed, and at the instance and upon the relation of any citizens of this State.
1891, c. 106, §3; 1897, c. 58, §6; Code 1923, 22D, §6; 1929, c. 86, §14.)

CHILD LABOR

Chapter 21
Article 6

Employment of children under fourteen.
Employment of children under sixteen in certain occupations; how determined; appeal to supreme court.
Issuance of work permit; vacation work permit; special work permit.
Contents of permit; forms; filing; revocation.
Age certificate for employer; inquiry as to age; revocation of certificate; supervision by state superintendent of schools.

6. Inmates of industrial home or school.
7. Hours and days of labor by minors; duty of employer to post notice thereof.
8. Officers for enforcement of this article.
9. Offenses; penalty.

§1. Employment of Children Under Fourteen.—No child under fourteen years of age shall be employed, permitted or suffered to work in, about, or in connection with any gainful occupation except agriculture or domestic service: **Provided,** That boys twelve years of age or over may be employed in mercantile establishments and business offices outside of school hours, if they obtain special work permit from the school authorities as hereinafter provided.

It shall be unlawful for any person, firm or corporation to employ or permit any child under fourteen years of age to work in any business or service whatever during any of the hours when the public schools of the school district in which the child resides are in session. (1887, c. 11, §1; 1891, c. 15, 1905, c. 75, §1; 1911 c. 60, §1; 1919, c. §1; Code 1923, c. 15H, §71.)

§2. Employment of Children Under Sixteen in Certain Occupations; How Determined; Appeal to Supreme Court.—No child under the age of sixteen years shall be employed, permitted, or suffered to work in any occupation dangerous to the life or limb or injurious to the health, or morals of such child. The state commission of labor, the state commissioner of health, and the state superintendent of free schools may, from time to time, after hearing duly had, determine whether or not any particular trade, process of manufacture, or occupation in which

employment of children under the age of sixteen years is not already forbidden by law, or any particular method of carrying on such trade, process of manufacture, or occupation, is sufficiently dangerous to the lives or limbs, or injurious to the health or morals, of children under sixteen years of age to justify their exclusion therefrom. No child under sixteen years of age shall be employed or permitted to work in any occupation thus determined to be dangerous or injurious to such children. There shall be a right of appeal to the supreme court of appeals from any such determination.

No child under the age of sixteen years shall be employed or permitted to work in any mine, quarry, tunnel or excavation. No child under the age of sixteen years shall be apprenticed, given away, let out, or otherwise disposed of to any person or company to engage in the occupation or service of rope or wire walker, gymnast, contortionist, circus rider, acrobat or clown, nor in any indecent, obscene or immorial exhibition or practice; and it shall be unlawful for any person, firm or corporation, to take, receive or employ such child for any of the purposes or occupations mentioned in this paragraph. (1911, c. 60, §2; 1919, c. 17, §2; Code 1923, §1, §72.)

Issuance of Work Permit; Vacation Permit; Special Work Permit.—No child between the ages of fourteen and sixteen years shall be employed or permitted to work in any gainful occupation, unless the person, firm or corporation by whom such child is employed or premitted to work, obtains and keeps on file and accessible to the officer charged with the enforcement of this

article, a work permit issued by the superintendent of schools of the city or county in which such child resides, or by some person authorized by him in writing. Before any such work permit has been issued, it shall be necessary to obtain in writing the consent of the parent or parents, guardian or custodian of such child. Whenever such work permit has been issued, or whenever an age certificate has been issued under the provisions of section five of this article, it shall be conclusive as to the age of the child on whose behalf such work permit or age certificate was issued. The superintendent of schools or person authorized by him in writing shall issue such work permit only upon receipt of the following documents.

Proof of Prospective Employment.—A written statement, signed by the person for whom the child expects to work, that he intends legally to employ such child and agrees to return the work permit to the issuing officer within two days after the termination of such child's employment;

Proof of Age.—(a) A birth certificate or attested transcript thereof issued by the registrar of vital statistics or other officer charged with the duty of recording births;

(b) A record of baptism or a certificate or attested transcript thereof showing the date of birth and place of baptism of the child; or

(c) A bona fide contemporary record of the date and place of the child's birth entered in the Bible in which the records of births of the family of the child are

erved, or other documentary evidence ap-roved by the state commissioner of labor, uch as a passport showing the age of the hild, a certificate of arrival in the United tates issued by the United States immigra-on officers and showing the age of the child, a life insurance policy: **Provided,** That ch other satisfactory documentary evidence all have been in existence at least one year ior to the time it is offered in evidence: **rovided further,** That a school record or rent's, guardian's or custodian's affidavit, rtificate, or other written statement of age ee shall not be accepted;

(d) A certificate signed by the public alth physician or a public school physician ecifying what in the opinion of such physi-n is the physcial age of the child. Such rtificate shall show the height and weight the child and other facts concerning its sical developement revealed by examina-and upon which the opinion of the physi-n as to the physical age of the child is ed. In determining such physical age the sician shall require that the school record the school census record showing the ild's age be submitted as supplementary evi-ce.

e issuing officer shall require first the f specified in subdivision (a) and shall ccept the proof designated in any sub-nt subdivision until he shall be convinced the proof specified in the preceding sub-on can not be obtained;

of of Schooling.—A certificate signed e principal of the school last attended g that the child can read and write

correctly simp.. sentences in the Engl
language and that he has satisfactorily co
pleted the studies covered in the first
yearly grades of the elementary public scho
or their equivalent. In case such certific
can not be obtained, then the officer issu
the work permit shall examine such child
determine whether he can meet the edu
tional standard specified and shall file in
office a statement setting forth the result
such examination: **Provided,** That the sup
intendent of schools or person authorized
him in writing shall have authority and
hereby empowered it issue a vacation w
permit to children fourteen years of age
over without requiring a statement that
child has completed the sixth grade of
elementary course of study, or its equival
as hereinbefore provided. Such vacation w
permit shall be different in form and c
from the regular work permit and shall
valid only during the time when the p
schools of the district in which the chil
sides are not in session. Every vacation w
permit shall be null and void on the day
public schools open for regular session:
vided further, That the superintendent
schools or person authorized by him in w
shall have authority and is hereby empow
to issue a special work permit to any
twelve years of age or over to work in
iness offices and mercantile establish
outside of school hours without requir
statement that he has completed any
grade whatsoever;

Proof of Physical Fitness.—A certi
signed by a medical inspector of scho
public health officer stating that the
has been examined by him and in his

...n has reached the normal devolopment of ...child of its age, and is in sound health ...d physically able to be employed in the ...cupation in which the child intends to ...gage. (1911, c. 60, §2; 1919, c. 17, §3; ...de 1923, c. 15H, §73; 1927, c. 38.)

...§4. Contents of Permit; Forms; Filing; ...vocation.—The work premit mentioned in ...e foregoing section shall set forth the full ...me, the date and place of birth of the ...ild, with the name and address of his par...ts, guardian or custodian, and shall certify ...t the child has appeared before the officer ...uing the permit and submitted the proofs ...f age, physical fitness, schooling and ...spective employment required in the fore...ng section. Printed forms for such permits ...d certificates shall be prepared and fur...shed by the state commissioner of labor to ...superintendent of schools in the cities and ...nties of the State. A copy of each permit ...ed shall be forwarded to the state commis...er of labor within four days after its is...ce, and there shall be kept in the office ...e issuing officer a record of all permits ...ted and of all applications denied as well ...d certificates of age, schooling, physical ...s and prospective employment submitted ...e applicants for premits. The state com...ner of labor may at any time revoke a ...it if in his judgment it was improperly ...d, and for this purpose he is authorized ...vestigate the true age of any child em...d, to hear evidence, and to require the ...uction of relevant books or documents. ...e permit be revoked, the issuing officer ...e person employing the child at the time ...e notified of such action, and the child ...ot thereafter be employed or premitted

to labor until a new permit has been legall
obtained. (1911, c. 60, §2; 1919, c. 17, §
Code 1923, c. 15H, §74.)

**§5. Age Certificate for Employer; Inquir
as to Age; Revocation of Certificate; Supe
vision by State Superintendent of Schools.**
Upon the request of any employer who
desirous of employing a child who represen
his or her age to be sixteen years or ov
the local officer charged with the issuance
work permits shall require of such child t
proof of age specified in section three of t
article, and, upon receipt thereof, if it
found that the child is actually sixteen ye
of age or over, shall issue to such employe
certificate showing the age and date and pl
of birth of such child. Such age certifica
when filed in the office of the employer, sh
be accepted by the officer charged with
enforcement of this article as evidence of
age of the child in whose name it was issu
Any officer charged with the enforcement
this article may inquire into the true age
a child apparently under the age of sixt
years who is employed or permitted to w
in any gainful occupation and for whom
work permit or age certificate is on file,
if the age of such child be found to be
tully under sixteen years, the presence
such child in such establishment shall
deemed a violation of the provisions of
article. The state commissioner of labor
at any time revoke any such age certifi
if in his judgment it was improperly iss
and for this purpose he is authorized to
vestigate the true age of any child empl
as in the case of work permits. The issu
of work permits and of age certificates
be under the supervision of the state su

tendent of free schools, who shall seek at all
es to standardize this work. (1919, c. 17,
; Code 1923, c. 15H, §74a.)

6. Inmate of Industrial Home or School. It shall be unlawful for superintendents other persons in whose custody children of West Virginia industrial school for boys, st Virginia industrial home for girls, West ginia industrial school for colored boys, West Virginia industrial home for colored are placed to permit such children to be loyed in the factories or workshops out- of these institutions without first secur- for them the permits required by this ar- . (1921, c. 145, §1; Code 1923, c. 15H, a.)

7. Hours and Days of Labor by Miners; of Employer to Post Notice Thereof.— hild under the age of sixteen years shall ployed or permitted to work in, about, connection with, any gainful occupation, t agriculture or domestic service, for than six days in any one week nor more forty-eight hours in any week, nor more eight hours in any one day, nor before our of six o'clock in the morning, nor the hour of seven o'clock in the evening day. Every employer shall post and posted in a conspicuous place in every where any child between the ages of en and sixteen years is employed or ted to work, a printed notice setting the maximum number of hours such per- y be required or permitted to work- y of the week, the hours beginning ing work each day, and the time for meals. The printed form of such shall be furnished by the state com-

missioner of labor, and the employment
such child for a longer time in any day th
so stated, or at any time other than as stat
in such printed notice, shall be deemed a vi
ation of the provisions of this section. (191
c. 17, §6; Code 1923, c. 15H, §74b.)

**§8. Officers for Enforcement of This A
ticle.**—It shall be the duty of the state co
missioner of labor, his assistants, factory
spectors, school truancy officers and
credited agents of the humane society, to
force the provisions of this article: **Provid
however,** That the provisions relating to
employment of children in mines shall be
forced by the state department of mines,
department to make complaint against
person firm or corporation violating any
the provisions of this article, and to prosec
the same before any magistrate or court
competent jurisdiction. (1905, c. 75,
1911, c. 60, §4; 1919, c. 17, §7; Code 19
c. 15H, §74c.)

§9. Offenses; Penalty.—Any person
agent or representative of any firm or
poration, who violates any of the provis
of this article, or any parent, guardian
custodian of any child, who permits such
to work in violation of any of the provis
of this article, or any superintendent
county or city schools who illegally issu
work permit to a child or any person
furnishes false evidence in reference to
age, birthplace or educational qualificatio
a child, shall be guilty of a misdemeanor
upon conviction thereof, shall, for a firs
fense, be fined not less than twenty nor
than fifty dollars; for a second offense,
be fined not less than fifty nor more
two hundred dollars, or imprisoned fo

ore than thirty days, or both fined and imisoned; and for a third or subsequent ofnse, shall be fined not less than two hundred llars, or imprisoned for not more than sixty ys, or both fined and imprisoned. (1887, c. §2; 1905, c. 75, §2; 1911, c. 60, §3; 1919, 17, §8; Code 1923, c. 15H, §74d.)

ADJOINING OWNERS

CHAPTER 37

ARTICLE 5

Excavation near boundaries.
Survey of mine.
Prosecution under preceding sections.

[1]. **Excavations Near Boundaries.**—No ner or tenant of any land containing coal l open or sink, or dig, excavate or work in, coal mine or shaft on such land, within feet of the line dividing such land from of another person or persons, without the nt in writing of every person interested r having title to, such adjoining lands in ssion, reversion, or remainder, or of the rdian of any such person as may be an t, or the committee of any such person y be insane or convict. If any person violate this section, he shall forfeit five red dollars to any person injured thereby may sue for the same. (Code 1849, c. P. 7; Code 1860, c. 124, P. 7; Code 1868, P. 7; Code 1925, c. 79, P. 7.)

risor's Note—Insane persons and conre added in this section. The same reawhich are applicable to infants apply to

[2]. **Survey of Mine.**—The owner, tenant upant of any land on which a coal mine ned and worked, or his agent, shall any person interested in, or having , any land coterminous with that in

which such coal mine is, to have ingress an egress with surveyors and assistants to ex plore and survey such mine at his own ex pense, and not oftener than once a month for the purpose of ascertaining whether o not the preceding section has been violate Every owner, tenant, occupant or agent, wh shall refuse such permission, exploration o survey, shall forfeit twenty dollars for eac refusal to the person so refused. (Code 184 c. 124, P. 8; Code 1860, c. 124, P. 8; Co 1868, c. 79, P. 8; Code 1923, c. 79, P. 8.)

§3. **Prosecution Under Preceding Sectio** —A justice of the county in which such mi is, before whom complaint of such refusal made, may issue summons to such own tenant, occupant or agent to answer such co plaint. On the return of the summons ex cuted, and proof that the complainant h right of entry, and that he has been refus without sufficient cause, the justice sh designate an early and convenient time such entry to be made, and issue his warr commanding the sheriff of the county to tend and prevent obstructions and impedim to such entry, exploration and survey. T cost of such summons, and a fee of three lars to the sheriff executing the warrant s be paid by the person whose refusal cau the complaint. But if the justice dismiss complaint, the costs shall be paid by the p making it. (Code 1849, c. 124, Sec. 9; C 1860, c. 124, Sec. 9; Code 1868, c. 79, 9; Code 1923, c. 79, Sec. 9.)

I hereby certify that the forgoing is a rect copy of the state laws pertaining to ing, as printed in the Official Code of Virginia, 1931, and amended by the Leg ture of 1933.

ERNEST L. BAILEY,
Chief of Department of M

EXPLOSIVES MALICIOUSLY PLACED

CHAPTER 21—ACTS 1933

(House Bill No. 332)

Placing of dynamite or other explosive substance in or near coal mine, building, etc., with intent to destroy same, if human life or safety endangered if intent accomplished, a felony; penalty; carrying or possession of bomb or other explosive substance with intent to use same unlawfully against person or property, a felony; penalty.

Be it enacted by the Legislature of West Virginia:

Section 1. If any person places in, upon, or against, or near to any coal mine, ing, car, vessel, or other structure, gunder, dynamite, nitroglycerine or any other ive substance, with intent to destroy, down, or injure the whole or any part f, under such circumstances, that, if the were accomplished, human life or safety be endangered thereby, although no e is done, he shall be guilty of a felony, on conviction, shall be confined in the tiary not less than one year; also if rson carries or possesses a bomb, bombr other explosive substance with the to use the same unlawfully against the or property of another, he shall be of a felony, and, upon conviction, shall d not to exceed five hundred dollars confined in the penitentiary not to five years.

NOTICE

Rules adopted by the.....

.....

for the government and operation of it

at .....

County, West Virginia, made in con
with the requirements of the Acts
Legislature of 1931.

Sec. 72. Special Rules by Operator;
—The operator of every mine in th
shall adopt special rules for the gov
and operation of his mine or mines,
all the work pertaining thereto in
side of the same ,which, however, s
be in conflict with the provisions of
ing laws of this State. Such rule
established, shall be printed on cardb
the languages spoken by ten or m
ployees, and shall be posted in th
house, tipple or some other conspicuo
about the mines where the same may
and observed by all employees at suc
When such rules are so posted, th
operate as a notice to all employees
mine of their acceptance of the
thereof. It shall be the duty of ea
operator to furnish a printed copy
rules to each of his employees when r
by either or any of them.

RULES

WEST VIRGINIA SAFETY CREED

believe in safety because duty demands
My duty to my loved ones and to my
mmen compels me to believe in and
ice safety. I believe in safety because
a duty I owe to my employer; as a safe
I am an asset to him, otherwise I am a
ity. I believe in safety because the
try in which I earn my living is de-
nt upon safe men for its successful
ration.

DUTIES OF MINE FOREMEN

1. It is the first and paramount
of the mine foreman to carefully ob-
and require the strict observance by
nder his supervision of the mining
f West Virginia and the rules pro-
ed by the coal company for the pur-
f avoiding injuries to employees.
mine foreman is empowered and it
duty to exercise thorough supervision
working places. And—
eport to the District Mine Inspector
lations of the mining laws for prose-
in accordance with the provisions of
w.
ovide and deliver to working places
nate supply of *mine props, caps* and

nstruct all inexperienced employees
practices and safety methods.
minate reckless conduct by em-
in the performance of their work.
uire strict obedience to his orders.
orce rigid discipline.

DUTIES OF EMPLOYEES

Rule 2. A person seeking employm shall apply to the mine foreman out of mine, and shall truly state his na age, residence, citizenship, dependents, ner occupations and employers, how employed, whether or not he has been jured, how and where accident happe and length of time disabled, for prese tion in the employment record of the pany; and if requested by the com shall submit himself to a physical exa tion by the mine physician, the resul which examination shall be made a pa the employment record.

Rule 3. All employees upon entering mine shall go direct to their working p and no person shall be permitted to in or about the mine, buildings or ma ery, or go into an abandoned part o mine without permission in writing fro mine foreman.

Every employee is forbidden from pering with any door used for ventil or any machinery or equipment in or the mines, except in the discharge duty.

Rule 4. When an employee is i in the line of his employment, it sh his duty to report such injury, ho trivial, within twenty-four hours to mine foreman in the presence of a w unless it be of such serious nature he is unable to do so; and the mine man shall forthwith file a report of in the company office, including na witness.

. It shall be the duty of each em-
this company:
mply with the mining laws of this
d to report any violation coming
observation to the mine foreman.
erve every precaution to prevent
inside, outside or about the mines.
y the orders of the section fore-
ine bosses and their superiors, and
the maintenance of **order, safety,**
line throughout the plant.

TIMBERING

Every miner needing props, cap
timber shall make request there-
t one day in advance, and in case
ot supplied he shall cease work
ial is furnished.

In addition to other tools, each
l be equipped with an axe and
and each day before beginning
examine his working place and
all dangerous slate or make it
per timbering.

st method to test the roof is to
finger tips of one hand against
hile a pick in the other hand
tap the roof. The hand pressed
roof will feel the vibrations
om tapping. Attention should
the sound as well. A clear,
nd denotes good condition, while
ow sound indicates dangerous

SE OF EXPLOSIVES

No employee shall take into
larger quantity of powder or
ive than he may expect to use

in one shift, and same shall be carri in an approved safe receptacle.

All explosives hauled into or out of m shall be in compliance with Paragraph Section 63 of the State Mining Laws.

Rule 9. Not more than one shot sh be fired at one time and only one kind explosive used in the same hole.

Coal dust or other inflammable mate shall not be used for tamping, nor sh fuse be used unless with written permis of the mine foreman.

Detonators must always be kept sepa from explosives, placed ten feet apart holes cut in rib on side farthest away f track.

No short squib or fuse shall be used.

Rule 10. After a shot has been fired, employee **before resuming work** shall m a careful examination as to the condi of the roof and its safety.

In case of miss-fire no person shall re to the working place for at least th minutes.

In no case shall the explosive be dr out.

Rule 11. Shooting off the solid is hibited, except by permission in wr from the mine foreman, under condi prescribed by the District Mine Inspect

GASEOUS MINES

Rule 12. No shots shall be fired in place known to liberate explosive gas such place has been properly examine a competent person, and approved for

In mines liberating explosive gas shall be fired only by electric deto and battery, or other method approv the department of mines.

e 13. In mines where gas is likely to countered, a safety lamp or gas or shall be provided for each cutting ne.

n dangerous gas is found the operator ge shall immediately stop the machine, ff the current, and machine shall started until gas has been removed e place pronounced safe.

ny gaseous mine no cutting machine e operated more than thirty minutes examination for the presence of

14. In gaseous mines, fire bosses xamine all working places and ad- places before men are permitted to e mine.

pillars are being extracted or when roof have occurred, the fire boss to the highest point to determine there is explosive gas present. He ve his initials and date as proof of mination.

HAULAGE AND TRAVEL

15. All persons are forbidden to n any incline or upon any car motor or other contrivance, except tted by law.

ployee shall travel to or from his n any slope, plane or motor road ther road is provided.

necessary to travel upon any such ane, road or haulway, employee every precaution to prevent acci- imself and others.

6. Motormen or brakemen shall t any person to ride on any loco- trip, except those duly author-

ized, and must stop trips to enforce rule.

Motormen shall not operate any locomotive without burning headlights, or defective brakes.

Brakemen shall be responsible for proper display of trip lights on rear all trips.

Motormen shall sound an alarm on proaching curves, doors, check curt cross-entries and places where workmen near the track.

Motormen, brakemen and other emplo and persons are prohibited from ri between cars; operating locomotive pole in reverse position; nipping on tr wire; cleaning sand pipe or sanding by hand while locomotive is in motion; jumping on or off moving trips.

When hauling rails, pipe and other terials, an empty car shall be placed tween the locomotive and the ma truck.

Rule 17. Every miner shall adequ block his car or cars when and whe the grade is sufficient to cause a run in either direction. Block shall be fur ed by the company.

MISCELLANEOUS

Rule 18. All employees are proh from wearing loose or hanging clothi apparel which may endanger life or li being caught in moving machinery.

ENING OF ABANDONED MINES

Enrolled Senate Bill No. 122

ction 1. Any person, without first giv- to the director of conservation ten days' e thereof in writing, shall not reopen for urpose whatsoever, any old or abandoned wherein water or mine seepage has col- d or become impounded or exists in such f or quantity that upon the opening of mine such water or seepage may drain y stream or water course. Such notice tate clearly the name or names of the or owners of the mine proposed to be its exact location, and the time of the d opening thereof.

receipt of any such notice, the con- on commission shall send its representa- deputized agent to be present at the the time designated in the notice for ening, who shall have full supervision work of opening such mine with full y to direct said work in such manner n seems proper and necessary to pre- flow of mine water or seepage from ine in such manner or quantity as will be harmful to the fish in any stream r course into which such mine water ge may flow directly or indirectly.

person failing to give notice as herein or failing or refusing to submit to ervision by the conservation commis- the work of any such opening, from hall result harmful effects to or de- n of fish in any stream, shall be guilty demeanor and upon conviction thereof fined not less than five hundred dol- more than five thousand dollars.

Received of.....one copy of the Mining Laws of the State of West Virginia, Chapter 22, Official Code of West Virginia, 1931. I also acknowledge receipt of instructions as to the particular and general danger incident to my employment in such mine.

.....

Witness:

.....

MINING LAWS

—OF—

STATE OF VIRGINIA

Effective June 16, 1924

ARTMENT OF LABOR AND INDUSTRY
JOHN HOPKINS HALL, JR., Commissioner

RICHMOND:
Chris Bottom, Superintendent of Public Printing.
1928

CHAPTER 76, CODE OF VIRGINIA.

Division of Mines.

Division of mines continued.
Qualifications of inspector of mines; for what removed; his records.
Inspection of mines; certificates of inspection to be posted; penalties.
Maps of mine required to be made; contents; how extended.
When inspector may cause maps to be made.
Inexperienced laborers; how instructed; conditions under which laborers worked; openings required.
When preceding section not applicable.
Punishment for violation of two preceding sections.
Machinery and appliances required; inspection of same; passway around shaft.
Punishment for violation of preceding section.
Character of engineers in certain cases; their duties; width of slopes etc.; refuge holes; gasoline engines underground.
Punishment for violation of preceding section.
Mine ventilation; amount required and how provided.
How many persons may be permitted to work in same air current; where no person shall work.
Accumulation of coal dust to be prevented.
How violations of three preceding sections punished.
Quantity of explosives allowed; punishment.

SEC.
1852. Minimum ventilation where fire d
may be encountered.
1853. Punishment for violation of prec
section.
1854. Protection from gas in old working
1855. When work resumed after blast;
workmen must withdraw.
1856. How violation of two preceding sec
punished.
1857. Fan required when gas is being gene
in dangerous quantities.
1858. Fire bosses; qualifications.
1859. Duties of fire bosses.
1860. How violation of three preceding sec
punished.
1861. Lamps required in such mines.
1862. How failure or refusal to comply
preceding section punished.
1863. Mine forman, his powers and dut
1864. Further duties of mine foreman.
1865. Assistant mine foremen.
1866. Stretchers and equipment required.
1867. Daily examination by mine forem
assistant; provisions to insure sa
1868. Mine foreman to notify operator or
of inability to comply with five p
ing sections.
1869. Punishment for violation of six prec
sections.
1870. When mine may be closed by insp
appeal to circuit court.
1871. Persons not permitted to work in
1872. Certain acts by miners prohibited.
1873. Explosions or other accidents to
ported and investigated.
1874. Certain reports required from
owners.
1875. Penalties for violation of certain
tions of inspector.
1876. Tamping; shooting off solid; use of

When steam locomotives may be used.
Rules to be adopted and posted by operators.
Protection of wires; voltage on trolley wires in new collieries.
Kinds of oil which may be used.
Test for standard cotton seed oil.
Penalties for furnishing or using improper oils; storage inside of mine of oils or other inflammable material limited.
When and how oils tested.
When provisions as to oil not to apply.
Owners not relieved from certain duties; who considered vice-principals.
Jurisdiction of justices and circuit courts.
To what mines this chapter applies; notice of opening of new underground mines.

1835. **Division of mines continued.**—ivision of mines, heretofore created, is ued. It shall be under and subject to the l of the Department of Labor and Industry, hall have for its purpose the supervision execution and enforcement of all laws l for the safety of persons employed with- t mines within the limits of the Common- , and the protection of mine property her property used in connection there- nd the said division shall be in charge fficial to be known as the State Mine r, hereinafter designated as inspector, ll be appointed by, be under the con- , and shall report to the Commissioner r. (1912, p. 419.)

1836. **Qualifications of inspector of for what removed; his records.**—The inshall have a thorough knowledge of the systems of working and ventilating coal nd of the nature and properties of mine

gases, especially explosive gases and dust; shall have a thorough and practical knowl of mining, gained by at least five years' exp ence at and in coal mines; and shall be of moral character and temperate habits. said inspector shall be removed from offi the Commissioner of Labor for incompet neglect of duty, drunkenness, malfeasance for other good causes. He shall keep a re of all inspections made by him and report to the Commissioner of Labor, who shall a permanent record thereof properly ind which record shall at all times be open to spection by any citizen of the Commonw and shall be collated and embodied in the nual report of the department. (Id.)

Sec. 1837. Inspection of mines; certifi of inspection to be posted; penalties.—Th spector shall deliver to the operator or oper of each mine inspected a certificate of in tion and shall post a duplicate certificate prominent place at or in the vicinity of mine inspected, of the operating com where it may be conveniently read by a the mine employees; said duplicate certi shall remain posted until a subsequent c cate is issued; and said inspector shall visit mine once in six months, or oftener if c on in writing by ten men engaged in an mine; or the owner, operator or superint of such mine, and make a personal exami of the interior of all mines, and outside mine where any danger may exist to the men, and shall particularly examine int condition of the mines as to ventilation, age and general safety, and shall make a of such examination, and he shall see th provisions of this chapter are strictly c out. The inspector failing to carry out th visions of this chapter shall be guilty of demeanor, and upon conviction thereof sh fined not less than fifty dollars nor more

hundred and fifty dollars, and shall be dis- from the office. (Id.)

1838. **Maps of mines required to be contents; how extended.**—The operator of every coal mine shall make or cause made, unless already made and filed, an map or plan of such mine, on a scale stated thereon, of one hundred or two hun- feet to the inch. Such map or plan shall the openings or excavations, the shafts, entries and airways, with darts or ar- showing direction of air currents, headings, pillars and so forth, and such portions mine or mines as may have been aban- the general inclination of the coal strata, much of the property lines and the out- the coal seam of the tract of land on said mine is located, as may be within hundred feet of any part of the workings mine. A true copy of such map or plan is delivered by such operator to the in- to be preserved among the records of partment of Labor and Industry, but in no shall any copy of the same be made with- consent of the operator or his agent; original map, or a true copy thereof, be kept by such operator at the office of and open at all reasonable times for mination and use of the inspector; and operator shall twice within every twelve to-wit: on or before the first day of ry and the first day of August of each while the mine is in operation, cause such be surveyed and the map thereof ex- so as to accurately show the progress workings, the property lines and outcrop described, and shall forward the same division of mines, to be kept on record, to the conditions hereinbefore stated.

1839. **When inspector may cause maps made.**— if the operator or agent of any

coal mine shall neglect or fail to furnish to
inspector any copy of map or extension ther
as provided in the preceding section, the
spector is authorized to cause a correct sur
and map or plan of said coal mine or ex
sion thereof to be made at the expense of
operator of such mine, the cost of which
be recovered from said operator as other d
are recovered by law; and if at any time
Commissioner of Labor has reason to bel
that such map or plan or extension thereof,
nished in pursuance of the preceding section
materially incorrect, or such as will not
the purpose for which it was intended, he
have survey and map or plan or extension th
of made or corrected, and the expense of
ing such survey and map or plan or exte
thereof, under the direction of said com
sioner, shall be paid by the operator, and
same may be collected as other debts are
coverable by law; but if found correct the
pense thereof shall be paid by the State. (1

**Sec. 1840. Inexperienced laborers; how
structed; conditions under which labo
work; openings required.**—It shall be the d
of the mine foreman or assistant mine fore
of every coal mine in this State to see
every person employed to work in such
shall, before beginning work therein, be
structed as to any unusual or extraordin
danger incident to his work in such mine w
may be known to or could reasonably be
seen by the mine foreman or assistant
foreman, and it shall further be the duty
such mine foreman to see that every such
son employed in such mine shall, upon req
be furnished with copies of this chapter
the printed rules of such mines.

Every inexperienced person so employed
work under the direction of the mine fore
his assistant or such other experienced wo
as may be designated by the mine foreman

istant until he has had reasonable opportunity to become familiar with the ordinary anger incident to his work, and it shall be unwful for the operator, agent or mine foreman any coal mine to employ any person to work said mine or permit any person to be in said ne for the purpose of working therein unless y are in communication with at least two enings or outlets separated by natural strata not less than one hundred feet in breadth, if mine be work by shaft, and of not less n fifty feet in breadth at the outlet, if worked slope or drift. To each of said outlets there ll be provided from the interior of the mine afe and available roadway properly drained, ich shall at all times while the mine is in eration, be kept reasonably free from obstion which might prevent travel therein in e of emergency, and if either of said outlets by the shaft it shall be fitted with safe and ilable appliances, such as stairs or hoisting chinery, which shall at all times, when the e is in operation, be kept in order and ready immediate use whereby persons employed the mine may readily escape in case of an ident. (Id.)

ec. 1841. **When preceding sections not applicable.**—The preceding section shall not be apl to any mine while work is being prosed with reasonable diligence in making comication between said outlets, necessary reand removing obstructions, so long as not than twenty persons are employed at any in said mine; neither shall it apply to any , or part of a mine, in which a second outhas been rendered unavailable by reason of final robbing of pillars, preparatory to abanment, so long as not more than twenty pers are employed therein at any one time. (Id.)

ec. 1842. **Punishment for violation of two eding sections.**—For violation of the two eding sections the operator, agent or mine

foreman shall, upon conviction, be fined not l
than fifty nor more than five hundred dolla
or be imprisoned in the county jail not less th
ten nor more than ninety days, in the disc
tion of the court or jury. (Id.)

**Sec. 1843. Machinery and appliances r
quired; inspection of same; passway aro
shaft.**—The operator or agent of every c
mine worked by shaft shall forthwith provi
and hereafter maintain, a metal tube from
top to the bottom of such shaft suitably adap
to the free passage of sound, through wh
conversation may be held between persons
the top and at the bottom of the shaft, a
the ordinary means of signaling, and an
proved safety catch and a sufficient cover ov
head on every carriage used for lowering
hoisting persons, and at the top of the shaft
approved safety gate, and an adequate brak
the drum of every machine used to lower
hoist persons in such shaft; and the said
erator or agent shall have the machinery u
for lowering or hoisting persons into and out
the mines kept in safe condition and inspec
once in each twenty-four hours by some co
petent person; and there shall be cut out a
around the side of the hoisting shaft or dri
through the solid strata at the bottom ther
a traveling way of not less than five feet hi
and three feet wide to enable a person to p
the shaft, going from one side of it to the ot
without passing over or under the cage or ot
hoisting apparatus. (Id.)

**Sec. 1844. Punishment for violation of p
ceding section.**—Any operator or agent who s
fail or refuse to comply with the requireme
of the preceding section shall be guilty o
misdemeanor, and upon conviction be fined
less than fifty nor more than five hundred
lars, or be imprisoned in the county jail not l
than thirty days nor more than one year,
the discretion of the court or jury. (Id.)

Sec. 1845. **Character of engineers in certain ...; their duties; width of slope, et cetera; ...fuge holes; use of gasoline engines under...ground.**—No operator or agent of any coal mine ...ked by shaft or slope, shall place in charge ... any engine, used for lowering into or hoisting ... of said mine persons employed therein, any ... competent and sober engineers. No engi... in charge of such machinery shall allow ... person, except such as may be deputed for ... purpose by the operator or agent, to in...fere with any part of the machinery, and ... person shall interfere with or intimidate the ...neer in the discharge of his duties; and in ...case shall more than ten persons ride on any ... or car at one time, and no person shall ... on a loaded cage or car in any shaft or ...

...ll slopes, engine planes or motor roads used ... persons in any mine shall be of sufficient ... to permit persons to pass moving cars ... safety or refuge holes of ample dimen... and not more than eighty feet apart shall ... made on either side of said slope, engine ... or motor roads; such refuge holes shall ... kept free from obstruction, and the roof ...side thereof shall be made reasonably se... and kept whitewashed at all times. No ...oline engine shall be operated underground ... in case where authorization for such ...ation shall have been obtained from the di... of mines. No person shall travel on ... to or from his work upon any slope, engine ... or motor road when other good roads are ...vided for that purpose.

...c. 1846. **Punishment for violation of pre...g section.**—For violation of the preceding ...on, the operator, agent or miner shall, upon ...iction, be fined not less than ten nor more ... five hundred dollars, or be imprisoned in ... county jail not less than ten nor more than

ninety days, in the discretion of the court jury. (Id.)

Sec. 1847. Mine ventilation; amount requi and how provided.—The operator, agent or m foreman of every coal mine, whether worked shaft, slope, or drift, shall provide and h after maintain for every such mine ample m of ventilation, affording no less than one h dred cubic feet of air per minute for each every person employed in such mine, and much more as the inspector may require, wh shall be circulated around the main head and cross headings and working places to a an extent as may be reasonably necessary dilute, render harmless and carry off the noxi and dangerous gases generated therein. And the working places shall advance break-throu for air shall be made not to exceed eighty f apart in pillars, or brattice shall be used w to properly ventilate the faces, and all break-throughs between intake and return ways not required for the passage of air, s be closed with stoppings substantially built suitable material, which shall be approved the inspector, so as to keep the working pl well ventilated. Every mine, after being erated for six months, shall be ventilated b mechanically driven fan of suitable capacity, cept in cases where the operation of such is deemed unnecessary by the division mines.

Sec. 1848. How many persons may be p mitted to work in same air current; when person shall work.—Not more than sixty per shall be permitted to work in the same air c rent, in any mine in which dangerous gas been detected in dangerous quantities; bu larger number, not exceeding eighty per may be allowed by the inspector where, in judgment, it would be impracticable to co with the foregoing requirements.

...o operator, agent or mine foreman shall ...it any person to work where they are un... to maintain at least one hundred cubic feet ...ute per minute per man, but this shall not be ...ued to prohibit the operator from employ... to make the place of employment safe ... comply with this requirement; but while ...epair work necessary to get the mine in ...tion to comply with the law is being done, ...rson shall be permitted to enter that part ...e mine affected, except those actually em... in doing the necessary repair work.

...1849. **Accumulation of coal dust to be ...ated.**—In all mines accumulation of fine, ...al dust shall, as far as practicable, be pre..., and such dust shall be properly moist... or otherwise treated to insure safety, in ...anner and form as the inspector may re... (Id.)

...1850. **How violations of three preced... sections punished.**—For violation of the ... preceding sections, the operator, agent, or ... foreman shall, upon conviction, be fined ...s than fifty nor more than five hundred ..., or be imprisoned in the county jail not ...an ten nor more than ninety days, in the ...tion of the court or jury. (Id.)

...1851. **Quanity of explosives allowed; ...ount.**—No miner or other employee shall ... into any mine in this State any larger ...ty of powder or other explosive than he ...asonably expect to use in any one shaft, ...l powder shall be carried into the mine ...ls containing not to exceed five pounds. ...erson violating this section shall, upon ...tion, be fined five dollars for each offense, ...prisoned in the county jail not exceeding ...ys. (Id.)

...1852. **Minimum ventilation where fire ... may be encountered.**—In all mines gen...

erating fire damp and where there is every
son to believe that gas will be encountered
the future workings and development of
mine, the minimum ventilation shall be
hundred and fifty cubic feet per minute for
and every person employed therein, and as
more as the inspector may deem requisite,
all stoppings on the main entries shall be
stantially filled with suitable material, so
keep the working places well ventilated;
in the main haulways shall be avoided in
mines where reasonably practicable, and
casts built of masonry or other incombu
material and of ample strength shall be
and where doors are used they must be
in a substantial manner and hung so as to
automatically when unobstructed. (Id.)

Sec. 1853. Punishment for violation of preceding section.—For violation of the pre
section the operator, agent or mine
shall, upon conviction, be fined not less
fifty nor more than five hundred dollars,
imprisoned in the county jail not less th
nor more than ninety days, in the discre
the court or jury. (Id.)

Sec. 1854. Protection from gas in old workings.—All old, unused workings and aban
parts of the mine must be protected by
safeguards as would prevent the dangerous
flow of any standing gas therein, and all
nues leading thereto shall be arranged and
ducted so as to give cautionary notice
such workmen in such mines of the dan
entering therein, and in order to secure
safety of the workmen in general against
danger in said abandoned or worked out
of the mines, proper notices shall be
and kept standing as far as practicable,
shall afford warning to all such workm
to enter such parts of said mine; and in
tion thereto, all persons, except those s
charged with that duty, are hereby for

nter such parts of said mine where gas may found. (Id.)

. 1855. **When work resumed after blast; workmen must withdraw.**—It shall be unful for any miner, after having exploded in working place sixty cubical inches or more powder, in one or more blasts, in any mine to generate gas in large quantities, to such working place and attempt to resume in any manner whatever with a naked light than twenty minutes after the blast has exploded. In all mines where explosive other gas of a dangerous or poisonous is known to generate in dangerous quanthe workmen shall be immediately inted to withdraw from the mine in case of stoppage of the fan, or heavy fall of the which may obstruct the main intake or reairway until such obstruction is removed.

. 1856. **How violation of two preceding punished.**—For violation of the two ding sections, such person or persons so ing shall be guilty of a misdemeanor, and conviction thereof shall be fined not less five nor more than one hundred dollars confined in the county jail not less than ys nor more than one year. (Id.)

. 1857. **Fan required when gas is being ted in dangerous quantities.**—It shall be ful in all mines where gas is being gen- in dangerous quantities, to use any other ical power for ventilation purposes exfan power and the fan shall be kept in ion night and day, unless written permisn granted by the Commissioner of Labor inspector, but no mine operator shall uired to keep such fan going where it is ary to shut down for the purpose of re- machinery or doing work in the mines, may make it necessary. (Id.)

Sec. 1858. Fire bosses; qualifications. shall be the duty of every mine owner or erator in this State, whose mine or mine known to generate fire damp or other dan gas or gases in dangerous quantities, to ploy a "fire boss" or "bosses" where more who shall have such knowledge of fire damp other dangerous gases as to be able to the same with the use of safety lamps, shall have a practical knowledge of the m of the ventilation of mines, and the mach and appliances used for that purpose and person with at least three years' experie mines generating gases. (Id.)

Sec. 1859. Duties of fire bosses.—It sh the duty of said fire boss or bosses, when ployed in said gaseous mines, to prep danger signal with suitable color at the entrance and no person except the mine o operator or agent and only then in ca necessity, shall pass beyond this danger s until the mine has been examined by the boss, and the same or certain parts there ported by him to be safe. It shall furth the duty of said fire boss or bosses to g all the working places of such mine or where gas is known to exist in dangerous tities, and carefully examine the same w safety lamp and do or cause to be done, ever may be necessary to remove from working place or places all dangerous gas make the same safe for persons to enter in as workmen in such mine or mines. examination and removal of said gases sh gin within three hours before the time shift commences work, and it shall be the of such fire boss at each examination to evidence of his presence at the face of working place examined and if the mine i he shall remove the danger signal, or c the color thereof to safety, in order tha employees may enter said mine and begin

the performance of the duties on the part the fire boss or bosses they shall have no erior officer, but all the employees working ein of said mine or mines shall be subordinate said fire boss or bosses in this particular ct. The fire boss shall, upon having com- ed the examination of the mine before each ft, make a written record of the condition the mine within a book having a form pre- ibed by the division of mines, which re- d shall at all times be kept at the mine sub- t to the inspection of the inspector. It shall unlawful for any person to enter said mine mines for any purpose at the beginning of t upon each shift therein until such signal or ning has been given by said fire boss, or on the outside of said mine or mines as to safety thereof, as herein provided, except er the directions of said fire boss or bosses, then for the purpose of assisting in mak- said mine safe. (Id.)

ec. 1860. **How violation of three preceding ctions punished.**—Any operator, agent, fire or other person who shall violate the pro- ons of the three preceding sections shall be ty of a misdemeanor and, upon conviction reof, shall be fined not less than fifty nor than five hundred dollars, or imprisoned the county jail not less than sixty days nor than one year. (Id.)

ec. 1861. **Lamp required in such mines.**— es in which explosive gas is known to be erated in dangerous quantities from coal adjacent strata shall be worked exclusively the use of locked safety lamps, and no other or torch shall be used except as may be itted in writing by the inspector. The y lamps used for examining any mine or as may be used for workings therein, shall furnished by and be the property of the ator of the mine, and shall be in charge of

some person to be designated by the "fire bos and at least two safety lamps shall be kept every coal mine, whether such mine generat fire damp or not. (Id.)

Sec. 1862. How failure or refusal to com with preceding section punished.—Any operat agent or other person who shall fail or refu to comply with the requirements of the pr ceding section shall be guilty of a misdemean and, upon conviction, shall be fined not le than fifty nor more than five hundred dolla or be imprisoned in the county jail not less th thirty days, nor more than one year, in t discretion of the court or jury. (Id.)

Sec. 1863. Mine foreman; his powers a duties.—In order to better secure the pro ventilation of every coal mine and promote t health and safety of persons employed there the owner, operator, or agent, shall employ competent and practical inside overseer, to b called mine foreman, who shall be an exp enced coal miner, or any person having f years' experience in a coal mine, who shall ha a careful watch over the ventilating appara and airways, traveling ways, pumps and dra age; and shall see that, as the miners advan their excavations, proper break-throughs a made to properly ventilate the mine; and sh use reasonable care to remove or secure t loose coal, slate and rock overhead in worki places and along the haulways, so as to prev danger to persons employed in such mines; a that sufficient props, caps and timber, as nea as possible, of suitable dimensions, are fu nished for the places where they are to be us and such props, caps, and timbers shall be d livered and placed at such points and the r for the government of each respective mine pr vides for them to be delivered; and every wo man in want of props, cap pieces and timb shall notify the mine foreman, or such oth person who may be designated for that purp

least one day in advance, or within such other e (not longer than one day) as may be pre-ribed by the written rules of the mine, giving number and kind of timbers he requires; in case of an emergency the timbers may ordered immediately upon the discovery of danger and no miner shall continue to work any working place known by him to be un-e, or which might have been so known to in the exercise of ordinary care, but the pening of an accident shall not in itself be to be evidence of such knowledge, or lack ordinary care on his part, or of negligence on part of the Company. It shall be the duty the mine forman to see that the cross-cuts made as required by law, and that the ventil-ion shall be conducted through such cross-cuts the room by means of check doors or cur-s placed on entries or other suitable places, he shall not permit any room to be opened advance of the ventilation. Should the mine pector discover any room, entry or airway other working place being driven in advance the ventilation contrary to the requirements this chapter, he shall order the workmen ring such places to cease work at once un-the law is complied with, but said mine in-ctor shall have authority to permit violations this provision when he considers it safe and rable so to do. The mine foreman shall sure the air currents at least twice each th at the inlet and outlet, and at or near faces of the advanced headings, and shall a record of such measurements in a book, ng a form prescribed by the chief of the sion of mines. An anemometer shall be vided for this purpose by the operator of mine. (1912, p. 419; 1916, p. 773.)

ec. 1864. Futher duties of mine foreman. shall further be the duty of mine foremen ave bore holes kept not less than twelve in advance of the face, and where neces-

sary, on sides of working places that are bei
driven toward, and in dangerous proximity
an abandoned mine or part of mine suspect
of containing inflammable gases or which
filled with water. On all haulways where ha
ing is done by machinery of any kind, the m
foreman shall provide a proper system of sign
and for the carrying of a conspicuous light
the front, and a light or flag on the rear,
every trip or train of cars when in motion; b
this shall not apply to trips being hauled
gathering motors or mule teams when oper
ing on other than main headings, and wh
hoisting or lowering men occurs before dayli
in the morning or at evening after darkn
At any mine operating by shaft the said m
foreman shall provide and maintain at the sh
mouth a light of a stationary character suffic
to show the landing and all surrounding obj
distinctly, and sufficient light of a station
character shall be located at the bottom of
shaft, so that persons coming to the bottom
clearly discern the cages and other obj
closely contiguous thereto. No cage on wh
men are riding shall be lifted or lowered at
rate of speed greater than six hundred feet
minute; no mine cars, either empty or loa
shall be hoisted while men are being lowe
or hoisted, and no cage having an unstable
dumping platform shall be used for the ca
ing of workmen unless the same is provided w
some device by which the same may be secu
locked when men are being hoisted or lowe
into the mine. (Id.)

Sec. 1865. Assistant mine foreman.—
mines in which the operations are so exten
that all the duties devolving upon the mine f
man cannot be discharged by one man, c
petent persons having three years' experience
a coal mine may be designated and appoi
as assistants, who shall act under the mine f
man's instructions, and shall be responsible

conduct in the discharge of their duties such designation or appointment. (Id.)

1866. **Stretchers and equipment required.**—At every mine where ten men are employed under ground, it shall be the duty of the operators thereof to keep always on hand at the mine a properly constructed stretcher, a woolen blanket, waterproof blanket, and all necessary remedies which may be advised by a medical practitioner employed by the company, and if there be as many as one hundred and fifty men be employed, two stretchers, with the necessary equipment as above advised. (Id.)

1867. **Daily examinations by mine foreman or assistant; provisions to insure safety.**—The mine foreman or his assistant shall visit and examine every working place in the mine each day while the miners are at work, and shall direct that each and every working place shall be secured by props and cap boards or timbers whenever necessary, which shall be placed and used by the miners working therein as in this chapter provided, to the end that the working places shall be made safe; and the mine foreman shall not permit, nor shall any one work in a place known to be unsafe, unless it be for the purpose of making it safe. In rib and pillar work at least one experienced miner shall be employed in each working place. (Id.)

1868. **Mine foreman to notify operator of inability to comply with five preceding sections.**—The mine foreman shall notify the operator or agent of the mine of his inability to comply with any of the requirements of the five preceding sections, and it shall then be the duty of any operator or agent, to cause attend to the matter complained of by the mine foreman, so as to enable him to comply with the provisions hereof, if the same can be practically done. (Id.)

Sec. 1869. Punishment for violation of preceding sections.—Any operator or agent any coal mine, or other person who shall neglect to comply with the requirements of the preceding sections shall, upon conviction, guilty of a misdemeanor, and shall be fined less than fifty nor more than five hundred lars, or be imprisoned in the county jail less than ten nor more than ninety days. mine foreman or employee failing to com with the said sections shall, upon conviction fined not less than five nor more than dollars, or imprisoned in the county jail not than ten days nor more than ninety days.

Sec. 1870. When mine may be closed by spector; appeal to circuit court.—The ope or agent of every coal mine shall furnish inspector proper facilities for entering mine and making examinations or obtaining formation; and if any inspector shall dis that any mine does not, in appliances for safety of the persons employed therein, con to the provisions of this chapter, or that by sons of any defect or practice in or at such the lives or health of persons employed th are endangered, he shall immediately, in ing, notify such operator or agent thereof, ing in such notice the particulars in whic considers such mine to be defective or dange and if he deems it necessary for the prote of the lives or health of the persons emp in such mine, he shall, after giving notic one day to said operator or agent in wr notify immediately the State mine insp who shall immediately examine the mine ported to be unsafe, and if upon such e nation, it is in fact found to be in an u condition, the division of mines shall i with order the mine, or such part there be closed until it is placed in a safe and p condition for mining operations; the own operator of any mine so closed, may appl

circuit court wherein such mine is located, the judge thereof in vacation by petition, for order directing such mine to be re-opened, such court, or the judge thereof in vacation, immediately hear and determine the matarising upon petition, and if upon full hearthereof the court, or the judge thereof in tion, shall find that said mine is in a reably safe condition, the prayer of said petishall be granted; but notice of said hearshall be given to the mine inspector or the missioner of Labor, three days at least besaid hearing; and in all such hearings the rney General shall appear for the State and the same. (1912, p. 419.)

1871. **Persons not permitted to work in** —No male person under sixteen years of and no female of any age, shall be perd to work in any coal mine, and in all of doubt the parents or guardians of such shall furnish affidavits of their ages. y operator, agent or mine foreman who knowingly violate the provisions of this , or any person knowingly making a false ent as to the age of any boy under sixyears of age applying for work in any mine, shall, upon conviction, be fined not than ten nor more than five hundred dolor be imprisoned in the county jail not less ten nor more than ninety days. (Id.)

1872. **Certain acts by miners prohibited.** miner, workman or other person shall gly injure any shaft, lamp, instrument, rse, brattice, overcast door or curtain, or t or throw open any airways, or carry s or open lights in the places worked by lamps, or disturb any part of the ma- or appliances, open a door used for di- ventilation and not close it again, or any part of a mine against caution, or human excretion in any air course,

through which the ventilation air current p
or disobey any order given in carrying ou
of the provisions of this chapter, or do any
act whereby the life or health of any
employed in the mines or the security
mines is endangered. It shall be unlawf
motormen, engineers or others operating
chinery of any kind hauling empty or
cars to make what is known as a flying
inside of a mine, except at designated
which points shall be conspicuously mark
shall be unlawful for any person, except
ployees engaged in operating the same, to
on the front or between any moving t
cars hauled by motor or other machine
on other machinery such as motors,
and coal cutting machines. Any person
shall violate the provisions of this section
upon conviction, be fined not less than
more than five hundred dollars, or be
oned in the county jail not less than
more than ninety days. When any oper
a mine shall refuse to furnish supplies
sary for the mine foreman to comply w
requirements of this chapter, within a
able time, after being requested to do
by reason of such refusal, a loss of life
jury may result to any employee, a
action for damages may ensue against
erator of the mine wherein such employ
not contributed to his own injury or loss.

**Sec. 1873. Explosions or other acci
be reported and investigated.**—Whene
reason of any explosion or other acci
any coal mine, or the machinery co
therewith, a loss of life or serious pers
jury shall occur, it shall be the duty
superintendent of the colliery, and in
sence, the mine foreman in charge of th
to give notice forthwith by mail or ot
to the inspector, stating the particulars
accidents; and the said inspector shall,

it necessary from the facts reported, im-tely go to the scene of such accident and suggestions and render such assistance as ay deem necessary for the future safety men, and investigate the cause of such ion or accident, and make a record there-ich he shall preserve with the other re- of his office; and to enable him to make investigation, he shall have the power to the attendance of witnesses, and to ad-er oaths or affirmations, and the cost of investigation shall be paid by the county ich such accident occurred. Any operator, superintendent or mine foreman who shall perform the duty provided in this sec-shall, upon conviction, be guilty of a mis-nor, and shall be fined not less than ten ore than five hundred dollars, or be im-d in the county jail not less than ten ore than ninety days, in the discretion of ourt. (Id.)

1874. **Certain reports required from owners.**—The operator or agent of every ine shall annually, during the month of mail or deliver to the inspector a report preceding twelve months, ending with irtieth day of June. Such reports shall he names of the operators and officers of ine, the quantity of coal mined and such information, not of a private nature, as om time to time be required by the in-. Blank forms of such reports shall be d by the Commissioner of Labor. If time any person, company or corpora-erating a coal mine shall transfer the ip of any mine to another person, com-r corporation, the person, company or ion transferring such ownership shall, thirty days, making a report to the State of mines of such change, and a state-the tons of coal produced since the July last, previous to the date of such

sale or transfer of such mine or mines operator or agent failing to furnish the re as required in this section, shall be guilty misdemeanor and, upon conviction, shall be not less than fifty nor more than five h dollars, or imprisoned in the county jail no than thirty nor more than ninety days. (

Sec. 1875. Penalties for violation of instructions of inspector.—Any operator, superintendent or mine foreman having charge any mine who shall knowingly p any person to work in any part of said m violation of instructions in writing, issu the inspector, made in compliance with th quirements of this chapter, shall, upon c tion, be fined not less than fifty nor more five hundred dollars, and any employee shall work in violation of such instruc shall, upon conviction, be fined not less ten nor more than fifty dollars. (Id.)

Sec. 1876. Tamping; shooting off soli of fuses.—No miner or other person tamp a shot-hole with coal. In any m which solid shooting is done, the inspec authorized to prescribe the conditions which such solid shooting may be done. fuse is used to ignite explosives in blasting rock, or other things, it shall be unlaw use a fuse which does not extend outs the hole at least four inches. All holes be tamped to the mouth. Any person vi the provisions of this section shall, upo viction, be fined not less than ten nor than fifty dollars.

Sec. 1877. When steam locomotives u used.—No steam locomotives shall be u mines where men are actually employed extraction of coal, except by the consent inspector, but this shall not be construed hibit any mine owner from operating a locomotive through any tunnel, haulway

mine that is not in actual operation and ...ishing coal. Any operator or agent who ...s this section shall be guilty of a misde... and, upon conviction, shall be fined not ...than fifty nor more than five hundred dol... or be imprisoned in the county jail not ...than thirty nor more than ninety days. (Id.)

... 1878. **Rules to be adopted and posted ...erators.**—There shall be adopted by the ...or of every mine in this State special ... for the government and operation of every ... covering all the work pertaining thereto ... outside of the same, which, however, ... not be in conflict with the provisions of ...ing laws of this State. Such rules when ...shed, shall be printed on cardboard, in the ...ges spoken by ten or more employees, ...all be posted up in the drum house, tipple ... other conspicuous place about the mines ... the same may be seen and observed by all ... employees at such mines, and when said ... are so posted the same shall operate as ... to all employees, at such mines of their ...nce of the contents thereof; and it shall ... duty of each mine operator to furnish ...ted copy of said rules to either of his ...ees when requested by him. Any oper... agent who violates the provisions of this ... shall be guilty of a misdemeanor and, ...nviction, shall be fined not less than fifty ...re than five hundred dollars, or be im...d in the county jail not less than thirty ...re than ninety days. (Id.)

... 1879. **Protection of wires; voltage on ... wires in new colleries.** In all electric...ipped mines at partings or other places ... men are required to pass under bare ...wires hanging less than six feet six inches ...the place where he is required to walk, ...e shall be protected, either by having ... in a trench cut in the top, or by means ...ard along the wire or by any other

method that shall be approved by the
mine inspector or his assistant. Electric
used on trolley wires in collieries estab
after July first, nineteen hundred and
four, shall not exceed three hundred volts.
person violating the provisions of this
shall, upon conviction, be fined not less
ten nor more than fifty dollars.

Sec. 1880. Kinds of oil which may be
Only animal, vegetable or paraffine oil, or
oil as free from evolution of smoke as a
ard cottonseed oil, when burned in a
lamp shall be used in any open lamp or
for illuminating purposes in any coal
this State, and kerosene or blackstrap oil
mixture of kerosene and blackstrap, sha
be used in miners' torches for illuminating
poses in any coal mine in this State; but
ture of mineral oil (other than blackstra
and vegetable oil may be used (in lamps)
machinery used as a motive power to
coal in any mine in this State, and a
of mineral and vegetable oil may be
all stationary lights. (1912, p. 419.)

Sec. 1881. Test for standard cotton
A standard cottonseed oil shall have
lowing test:

(a) It shall be free from mineral
mineral oil compounds.

(b) It shall be tested in a glass
and one-half inches in diameter by eight
deep and the oil shall be at a tempera
sixty degrees Fehrenheit when the test
and shall not exceed twenty-four degrees
abue hydrometer.

(c) If the oil to be tested is below
five degrees Fahrenheit temperature, it
slowly heated until it reaches eighty-five
temperature and below sixty-five deg
must be heated to seventy-degrees,
either case it must be well shaken and

gradually to a temperature of sixty de-
, when the test must be made.

In testing the gravity of oil the hydro-
must be, when possible, read from below,
the last line which appears under the sur-
of the oil shall be regarded as the true
ing.

Where the oil is tested in difficult cir-
nces an allowance of one-half of one de-
may be made for error or parallax.

All oil sold to be used for illuminating
es in the mines of this State shall be con-
in barrels, casks or packages, branded
ously with the name and address of the
facturer of said oil, the specific gravity of
e and the date of shipment. (Id.)

1882. **Penalties for furnishing or using
r oil; storage inside of mine of oils
r inflammable material limited.**—Any per-
n or corporation selling or offering for
illuminating purposes in any mine in
te any oil or any mixture or compound
which does not comply with the tests, as
ed in section eighteen hundred and
whether done through an agent or em-
or not, shall be deemed guilty of a mis-
r, and, upon conviction thereof fined
than twenty-five nor more than one
dollars for each offense.

iner, or employee in any mine, or em-
f any mine operator or mine owner,
ll knowingly use or permit to be used
inating purposes in any mine in this
y oil other than that prescribed in sec-
teen hundred and eighty, or who shall
permit the storage of oils or other in-
e material inside of a mine in quanti-
ess of normal daily needs, shall be
a misdemeanor and upon conviction
be fined not less than five nor more
nty-five dollars, or be confined in jail

not less than five nor more than sixty
or both, for each offense.

Sec. 1883. When and how oils teste
shall be the duty of the district mine inspe
whenever they have reason to believe th
is being used or sold, or offered for sale, i
lation of the provisions of this chapter, to
samples of the same and have them teste
der the direction of the chief mine insp
and if they are found to be inferior t
quality prescribed by this chapter, the ins
shall make complaint to the prosecuting
ney of the county in which the offense is
mitted, who shall forthwith commence pr
ings against the offender.

Any miner, mine employee, firm, corpo
or their agents, who shall refuse to perm
mine inspector to examine his or their oi
for or sold for illuminating purposes in th
mines of this State, shall be guilty of a
tion of this chapter, and may be taken
a justice of the peace and fined five doll
imprisoned in the county jail for ten da
each offense.

In all cases where the accused stand
victed of a violation of this chapter the c
such prosecution shall be borne by the p
firm or corporation so convicted, and in c
a failure to convict, the State shall pay th
in the same manner as in other prosecutio
misdemeanors. (Id.)

Sec. 1884. When provisions as to oil
apply.—The foregoing provisions conc
oils and the use thereof shall not apply
mine or any part thereof unless the mi
spector, in his judgment, believes it nec
and shall notify in writing the person o
pany operating the same that the said
sions shall apply to his mine or any part
of, as the case may be, or unless the
or operator of any such mine shall noti

spector in writing that it is the wish of ner or operator that said provisions shall o said mine or part thereof, as the case , and in such case said provisions con- oils and the use thereof shall apply to e effect in thirty days after such no- given by said inspector or by said mine or operator to said inspector. (Id.)

1885. **Owner not relieved from certain who considered vice-principals.**—Noth- this chapter shall be so construed as to the mine owner or operator from seeing l of the provisions of this chapter are complied with, nor from the duty im- t common law to secure the reasonable of their employees and, in the perform- those duties that are non-assignable at law, as well as those duties required chapter, the mine foreman, boss or fire d their assistants shall be considered as for the mine owner or operator as a ipal. (Id.)

1886. **Jurisdiction of Justices and cir- rts.**—In all prosecutions under this chap- circuit courts and justices of the peace ve concurrent jurisdiction, with right al to the circuit court. (Id.)

1887. **To what mines this chapter ap- tice of opening of new underground** -The provisions of this chapter shall ap- al mines, and other underground mines s applicable; and no new underground ll hereafter be opened without first giv- ice to the division of mines. Any firm or corporation opening a new un- d mine, without first giving such no- ll be deemed guilty of a misdemeanor, n conviction thereof, shall be fined not n ten nor more than five hundred dol-

[fol. 862]

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PLAINTIFF'S EXHIBIT 11

Carter Coal Company

Taxes Paid—1934

Year Ended December 31, 1934

	Period Covered by Tax		Amount
State of West Virginia:			
West Virginia Sales Tax—			
Rate $1.50 per $100 coal. .50 per $100 mdse. 1.00 per $100 other income	Last quarter of 1933	$4,811.16	
	Surtax for 1933	4,662.83	
	Three quarters of 1934	26,351.76	$35,825.75
Property Taxes—			
McDowell County Rate 1.72 per $100 valuation.	First half of 1933	$18,886.52	
	Second half of 1933	18,886.52	
	First half of 1934	17,900.39	55,673.43
License Tax	July 1, 1934—June 30, 1935	.....	547.90
Sundry License Taxes at Coalwood (Pool Tables, Cigarettes, Auto Tags, etc.)	.....	.....	(Not available)
Total West Virginia	.....	.....	$92,047.08
State of Virginia:			
Property Taxes—			
Tazewell County (Rate $2.90 per $100)	1934	$1,844.64	
Buchanan County	1934	482.40	$2,327.04
Franchise Tax	1934	.....	25.00
Total Virginia			$2,352.04

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PLAINTIFF'S EXHIBIT 11—Continued

	Year Ended December 31, 1934		
	Period Covered by Tax		Amount
State of Kentucky:			
Property Taxes—			
Bell County	1934	$180.32	
Knox County	1933	1,605.21	
	1934	1,348.37	$3,133.90
Total Kentucky	....	.....	$3,133.90
Sundry Other Taxes Paid:			
Delaware—Registration	1934	$50.00	
Filing Fees	1934	2.00	
Franchise	1933	170.83	$222.83
New York State Franchise	Year Ended October 31, 1935	.....	25.00
District of Columbia Property	1935	.....	259.14
Greensboro, N. C.—Property	1934	.....	8.08
Total Miscellaneous	....	.....	$515.05
Total Taxes Paid			$98,048.07

[fol. 863] PLT'FF'S EX. 12

Statement with respect to effect upon Carter Coal Company of the assessment against it in the year 1934 of a tax of 15% on the sale price at the mine of bituminous coal produced by it (approximate figures)

Tonnage sold	2,126,046 tons.
Sales price realized at the mine	$3,918,266.00
Net profit realized in operation of business	$323,998.00
If a tax of 15% on sales price at mine had been imposed, the tax payable would have been	$587,740.00
If aforesaid tax of 15% had been imposed, the Company's net loss in the operation of its business would have been	$263,752

Neither in the present year, nor at any time during the past five years, have the net profits of Carter Coal Company equaled 15% of the total sales price received by Carter Coal Company at the mine.

[fol. 864] PLT'FF'S EX. 13 AND 14

United States Department of the Interior

National Bituminous Coal Commission, Washington, D. C.

Notice to Bituminous Coal Producers of District Board Organization Meeting

Notice is hereby given to all producers of bituminous coal in District No. 7, as defined by Act of Congress, entitled "Bituminous Coal Conservation Act of 1935," that:

A meeting will be held at 10:00 o'clock A. M., on the 30th day of October, 1935, at Black Knight Country Club, Beckley, West Virginia, for the above named District No. 7, as defined by the said Act, of all qualified producers of bituminous coal, for the purpose of determining the number of members of a district board and for the election of its members, as the same is provided for in the said Act, and to consider and pass upon such other matters as may lawfully come before said meeting under the provisions of said Act.

Only qualified producers, as defined in General Order No. 3 of the National Bituminous Coal Commission, shall be entitled to participate in the said meeting and vote therein. Copies of General Orders No. 1, 2, and 3, and of Forms 1, 4, and 5, of said Commission may be procured from the undersigned Deputy at the address below stated.

All qualified producers voting by proxy must comply with said General Order No. 3.

Dated this 17th day of October, 1935.

P. M. Snyder, Acting Deputy District Secretary of the National Bituminous Coal Commission.

Address: Mount Hope, West Virginia.

Instructions to Acting Deputy District Secretaries

(Not to be Included in Notice Published in the Newspaper)

A copy of the above notice and of General Orders No. 1, 2, and 3, and the following Forms of the Commission: in duplicate, Form 4, and in triplicate, Forms 1 and 5, shall be mailed to all known producers in the district in accordance with the provisions of said General Order No. 3.

[fol. 865] PLAINTIFF'S EXHIBIT 45

United States Department of the Interior

National Bituminous Coal Commission, Washington, D. C.

General Order No. 1

An Order Promulgating the Bituminous Coal Code

Pursuant to Act of Congress, entitled "Bituminous Coal Conservation Act of 1935", the National Bituminous Coal Commission, by said Act duly created, in regular meeting duly assembled on this 9th day of October, 1935, for the purpose of carrying out the declared policy of said Act, hereby formulates and prescribes a working agreement, effective as provided in said Act, to be known as the "Bituminous Coal Code", as follows, to wit:

Bituminous Coal Code

The Act of Congress, entitled "Bituminous Coal Conservation Act of 1935", is hereinafter referred to as the "Act". The National Bituminous Coal Commission, created by said Act, is hereinafter referred to as the "Commission". This Bituminous Coal Code is hereinafter referred to as the "Code". A "Code Member", as hereinafter referred to, is a producer accepting the Code in the manner provided by the Commission, whose membership shall not have been terminated. The Bituminous Coal Labor Board, created by said Act, is hereinafter referred to as the "Labor Board". The term "bituminous coal" as used in this Code shall include all bituminous, semibituminous, and subbituminous coal and lignite. The term "producer" shall include all persons, firms, associations, corporations, trustees, and receivers engaged in mining bituminous coal.

Part I—Organization and Production

Sec. 1. Twenty-three district boards of coal producers shall be organized. Each district board shall consist of not less than three nor more than seventeen members. The number of members of the district board shall, subject to the approval of the Commission, be determined by the majority vote of the district tonnage during the calendar year 1934 represented at a meeting of the producers of the district called for the purpose of such determination and for the election of such district board; and all known producers within the district shall be given notice of the time and place of the meeting. All but one of the members of the district board shall be producers or representatives of producers truly representative of all the mines of the district. The number of such producer members shall be an even number. One-half of such producer members shall be elected by the majority in number of the producers of the district represented at the aforesaid meeting. The other producer members shall be elected by votes cast in the proportion of the annual tonnage output for the preceding calendar year of the producers in the district, with the right on the part of the producers to vote their tonnage cumulatively: Provided, That not more than one officer or employee of any producer within a district shall be a member of the district board at the same time. The remaining mem-

ber of each district board shall be selected by the organization of employees representing the preponderant number of employees in the industry of the district in question. The term of district board members shall be two years and until their successors are elected.

In case any marketing agency comprising a substantial number of code members in any producing field within a district establishes, to the satisfaction of the Commission, that it has no representation upon the district board and that it is fairly entitled thereto, the Commission may, in its discretion, after hearing, increase the membership of such district board so as to provide for such representation.

Marketing agencies may be established or maintained within any district by a voluntary association of producers within any producing field therein, as such producing field may be defined by the district board, and function under [fol. 866] such general rules and regulations as may be prescribed by the district board, with the approval of the Commission, for the purpose of marketing their coal with due respect for the standards of unfair competition as defined in said Act. Each such marketing agency shall impose no unreasonable or inequitable conditions of membership and shall be truly representative of at least one-third of the tonnage of any producing field or group of producing fields.

The term "marketing agency" or "agencies" as used in said Act shall include any trade association of coal producers complying with the requirements of a marketing agency and exercising the functions thereof.

The district boards and marketing agencies shall each have power to adopt bylaws and rules of procedure, subject to approval of the Commission, and to appoint officers from their own membership, to fix their terms and compensation, to provide for reports, and to employ such committees, employees, arbitrators, and other persons necessary to effectuate their purposes. Members of the district board shall serve, as such, without compensation, but may be reimbursed for their reasonable expenses. The territorial boundaries or limits of such twenty-three districts are set forth in the schedule entitled "Schedule of Districts" and annexed to this code: Provided, That the territorial boundaries or limits of any district or districts may be changed, or said districts may be divided or consolidated, after hearing, by the Commission.

Sec. 2. The expense of administering this code by the respective district boards shall be borne by those subject to the jurisdiction of such boards, respectively, each paying his proportionate share, as assessed, computed on a tonnage basis, in accordance with regulations prescribed by such boards with the approval of the Commission. Such assessments may be collected by the district board by action in any court of competent jurisdiction.

Sec. 3. Nothing contained in said Act shall constitute the members of a district board partners for any purpose. Nor shall any member of a district board be liable in any manner to any one for any act of any other member, officer, agent or employee of the district board. Nor shall any member of a district board, exercising reasonable diligence in the conduct of his duties under said Act, be liable to any one for any action or omission to act under said Act, except for his own willful misfeasance, or for nonfeasance involving moral turpitude.

Part II—Marketing

Sec. 4. All code members shall, in their respective districts, report all spot orders to the district board and shall file with it copies of all contracts for the sale of coal, copies of all invoices, copies of all credit memoranda, and such other information concerning the preparation, cost, sale, and distribution of coal as the Commission may authorize or require. All such records shall be held by the district board as the confidential records of the code member filing such information.

Each district board may set up and maintain a statistical bureau, and the district board may require that such reports and other information in this section described shall be filed with such statistical bureau in lieu of the filing thereof with the district board.

Each district board shall, from time to time on its own motion or when directed by the Commission, establish minimum prices free on board transportation facilities at the mines for kinds, qualities, and sizes of coal produced in said district, with full authority, in establishing such minimum prices, to make such classification of coals and price variations as to mines and consuming market areas as it may deem necessary and proper. In order to sustain the stabili-

zation of wages, working conditions, and maximum hours of labor, said prices shall be established so as to yield a return per net ton for each district in a minimum price area, as such districts are identified and such area is defined in the subjoined table designated "Minimum-price area table", equal as nearly as may be to the weighted average of the total costs, per net ton, determined as hereinafter provided, of the tonnage of such minimum price area. The computation of the total costs shall include the cost of labor, supplies, power, taxes, insurance, workmen's compensation, royalties, depreciation, and depletion (as determined by the Bureau of Internal Revenue in the computation of the Federal income tax) and all other direct expenses of production, coal operator's association dues, district board assessments for Board operating expenses only levied under this code, and reasonable costs of selling and the cost of administration.

Minimum-Price-Area Table

Area 1: Eastern Pennsylvania, district 1; western Pennsylvania, district 2; northern West Virginia, district 3; Ohio, district 4; Michigan, district 6; Panhandle, district 6; Southern numbered 1, district 7; Southern numbered 2, district 8; West Kentucky, district 9; Illinois, district 10; Indiana, district 11; Iowa, district 12; that part of Southeastern, district 13, comprising Van Buren, Warren, and McMinn Counties in Tennessee.

[fol. 867] Area 2: Southeastern, district 13, except Van Buren, Warren, and McMinn Counties in Tennessee.

Area 3: Arkansas-Oklahoma, district 14.

Area 4: Southwestern, district 15.

Area 5: Northern Colorado, district 16; southern Colorado, district 17; New Mexico, district 18.

Area 6: Wyoming, district 19; Utah, district 20.

Area 7: North Dakota and South Dakota, district 21.

Area 8: Montana, district 22.

Area 9: Washington, district 23.

The minimum prices so established shall reflect, as nearly as possible, the relative market value of the various kinds, qualities, and sizes of coal, shall be just and equitable as between producers within the district, and shall have due regard to the interests of the consuming public. The pro-

cedure for establishment of minimum prices shall be in accordance with rules and regulations to be approved by the Commission.

A schedule of such minimum prices, together with the data upon which they are computed, including, but without limitation, the factors considered in determining the price relationship, shall be submitted by the district board to the Commission, which may approve, disapprove, or modify the same to conform to the requirements of this section, and such approval, disapproval, or modification shall be binding upon all code members within the district, subject to such modification therein as may result from the coordination provided for in the succeeding section 5: Provided, That all minimum prices established for any kind, quality, or size of coal for shipment into any consuming market area shall be just and equitable as between producers within the district: And provided further, That no minimum price shall be established that permits dumping.

As soon as possible after its creation, each district board shall determine the weighted average of the total costs of the ascertainable tonnage produced in the district in the calendar year 1934. The district board shall adjust the average costs so determined, as may be necessary to give effect to any changes in wage rates, hours of employment, or other factors substantially affecting costs, exclusive of seasonal changes, so as to reflect as accurately as possible any change or changes which may have been established since January 1, 1934. Such determination and the computations upon which it is based shall be promptly submitted to the Commission by each district board in the respective minimum-price area. The Commission shall thereupon determine the weighted average of the total costs of the tonnage for each minimum-price area in the calendar year 1934, adjusted as aforesaid, and transmit it to all the district boards within such minimum-price area. Said weighted average of the total costs shall be taken as the basis for the establishment of minimum prices to be effective until changed by the Commission. Thereafter, upon satisfactory proof made at any time by any district board of a change in excess of 2 cents per net ton of two thousand pounds in the weighted average of the total costs in the minimum-price area, exclusive of seasonal changes, the Commission shall increase or decrease the minimum prices

accordingly. The weighted average figures of total cost determined as aforesaid shall be available to the public.

Each district board shall, on its own motion or when directed by the Commission, establish reasonable rules and regulations incidental to the sale and distribution of coal by code members within the district. Such rules and regulations shall not be inconsistent with the requirements of this code and shall conform to the standards of fair competition hereinafter established. Such rules and regulations shall be submitted by the district board to the Commission with a statement of the reasons therefor, and the Commission may approve, disapprove, or modify the same, and such approval, disapproval, or modification shall be binding upon all code members within the district.

Sec. 5. District boards shall, under rules and regulations established by the Commission, coordinate in common consuming market areas upon a fair competitive basis the minimum prices and the rules and regulations established by them, respectively, under section 4 hereof. Such coordination, among other factors, but without limitation, shall take into account the various kinds, qualities, and sizes of coal, and transportation charges upon coal. All minimum prices established for any kind, quality, or size of coal for shipment into any consuming market area shall be just and equitable, and not unduly prejudicial or preferential, as between and among districts, and shall reflect, as nearly as possible, the relative market values, at points of delivery in each common consuming market area, of the various kinds, qualities and sizes of coal produced in the various districts; to the end of affording the producers in the several districts substantially the same opportunity to dispose of their coals upon a competitive basis as has heretofore existed. The minimum prices established as a result of such coordination shall not, as to any district, reduce or increase the return per net ton upon all the coal produced therein below or above the minimum return as provided in section 4 of this code by an amount greater than necessary to accomplish such coordination, to the end that the return [fol. 868] per net ton upon the entire tonnage of the minimum price area shall approximate and be not less than the weighted average of the total costs per net ton of the tonnage of such minimum price area. Such coordinated prices

and rules and regulations, together with the data upon which they are predicated, shall be submitted to the Commission, which may approve, disapprove, or modify the same to establish and maintain such fair competitive relationship, and such approval, disapproval, or modification shall be binding upon all code members within the affected districts. No minimum price shall be established that permits dumping. On the petition of any district board or other party in interest or on its own motion, after notice to the district boards, the Commission may at any time conduct hearings to determine whether the foregoing method of fixing minimum prices under section 4 is prejudicial to any district with respect to the fair opportunity of such district to market its coal. Should the Commission so find, and further find that the prejudice cannot be removed through the coordination of minimum prices as provided for in this section 5, then the Commission may establish a different basis for determining minimum prices in such district, to the end that fair and competitive prices shall prevail in the marketing of the coal produced in such district: Provided, That the minimum prices so established as to any such district shall yield a return, per net ton, not less than the weighted average of the total costs, per net ton, of the tonnage of such district.

Sec. 6. When, in the public interest, the Commission deems it necessary to establish maximum prices for coal in order to protect the consumer of coal against unreasonably high prices therefor, the Commission shall have the right to fix maximum prices free on board transportation facilities for coal in any district. Such maximum prices shall be established at a uniform increase above the minimum prices in effect within the district at the time, so that in the aggregate the maximum prices shall yield a reasonable return above the weighted average total cost of the district: Provided, That no maximum price shall be established for any mine which shall not return cost plus a reasonable profit.

Sec. 7. If any code member or district board, or any State or political subdivision of a State, shall be dissatisfied with such coordination of prices or rules and regulations, or by a failure to establish such coordination of prices or rules and regulations, or by the maximum prices established for

him or it pursuant to section 6 of this code, he or it shall have the right, by petition, to make complaint to the Commission, and the Commission shall, under rules and regulations established by it, and after notice and hearing, make such order as may be required to effectuate the purpose of sections 5 and 6 of this code, which order shall be binding upon all parties in interest. Pending final disposition of such petition, and upon reasonable showing of necessity therefor, the Commission may make such preliminary or temporary order as in its judgment may be appropriate, and not inconsistent with the provisions of said Act.

Sec. 8. Subject to the exceptions provided in section 12 of said Act, no coal shall be sold or delivered at a price below the minimum or above the maximum therefor approved or established by the Commission, and the sale or delivery of coal at a price below such minimum or above such maximum shall constitute a violation of this code.

Subject to the exceptions provided in section 12 of said Act, a contract for the sale of coal at a price below the minimum or above the maximum therefor approved or established by the Commission at the time of the making of the contract shall constitute a violation of this code, and such contract shall be invalid and unenforceable.

From and after the date of approval of said Act, until prices shall have been established pursuant to sections 4 and 5 of part II of this code, no contract for the sale of coal shall be made providing for delivery for a period longer than thirty days from the date of the contract.

While said Act is in effect no code member shall make any contract for the sale of coal for delivery after the expiration date of said Act at a price below the minimum or above the maximum therefor approved or established by the Commission and in effect at the time of making the contract.

The minimum prices established in accordance with the provisions of this code shall not apply to coal sold by a code member and shipped outside the domestic market. The domestic market shall include all points within the continental United States and Canada, and car-ferry shipments to the Island of Cuba. Bunker coal delivered to steamships for consumption thereon shall be regarded as shipped within the domestic market. Maximum prices established in accordance with the provisions of this code

shall not apply to coal sold by a code member and shipped outside the continental United States.

Sec. 9. All data, reports, and other information in the possession of the National Recovery Administration in relation to bituminous coal shall be available to the Commission for the administration of said Act.

Sec. 10. The price provisions of said Act shall not be evaded or violated by or through the use of docks or other storage facilities or transportation facilities, or by or [fol. 869] through the use of subsidiaries, affiliated sales of transportation companies or other intermediaries or instrumentalities, or by or through the absorption, directly or indirectly, of any transportation or incidental charge of whatsoever kind or character, or any part thereof. The Commission is hereby authorized, after investigation and hearing, and upon notice to the interested parties, to make and issue rules and regulations to make this section effective.

Sec. 11. All sales and contracts for the sale of coal shall be subject to the code prices herein provided for and in effect at the time of the making of such sales and contracts. The Commission shall prescribe the price allowance to and receivable by persons who purchase coal for resale, and resell it in not less than cargo or railroad carload lots; and shall require the maintenance by such persons, in the resale of coal, of the minimum prices established under said Act.

Unfair Methods of Competition

Sec. 12. The following practices shall be unfair methods of competition and shall constitute violations of this code:

1. The consignment of unordered coal, or the forwarding of coal which has not actually been sold, consigned to the producer or his agent: Provided, however, That coal which has not actually been sold may be forwarded, consigned to the producer or his agent at rail or track yards, tidewater ports, river ports, or lake ports, or docks beyond such ports. Such limitations on the consignment of coal shall not apply to the following classes: Bunker coal, coal applicable against existing contracts, coal for storage (other than in railroad cars) by the producer or his agent in rail

or track yards or on docks, wharves, or other yards for resale by the producer or his agent.

2. The adjustment of claims with purchasers of coal in such manner as to grant secret allowances, secret rebates, or secret concessions, or other price discrimination.

3. The prepayment of freight charges with intent to or having the effect of granting a discriminatory credit allowance.

4. The granting in any form of adjustments, allowances, discounts, credits, or refunds to purchasers or sellers of coal, for the purposes or with the effect of altering retroactively a price previously agreed upon, in such manner as to create price discrimination.

5. The predating or postdating of any invoice or contract for the purchase or sale of coal, except to conform to a bona fide agreement for the purchase or sale entered into on the predate.

6. The payment or allowance in any form or by any device of rebates, refunds, credits, or unearned discounts, or the extension to certain purchasers of services or privileges not extended to all purchasers under like terms and conditions, or under similar circumstances.

7. The attempt to purchase business, or to obtain information concerning a competitor's business by concession, gifts, or bribes.

8. The intentional misrepresentation of any analysis or of analyses, or of sizes, or the intentional making, causing, or permitting to be made, or publishing, of any false, untrue, misleading, or deceptive statement by way of advertising, invoicing, or otherwise concerning the size, quality, character, nature, preparation, or origin of any coal bought, sold, or consigned.

9. The unauthorized use, whether in written or oral form, of trade marks, trade names, slogans, or advertising matter already adopted by a competitor, or any deceptive approximation thereof.

10. Inducing or attempting to induce, by any means or device whatsoever, a breach of contract between a competitor and his customer during the term of such contract.

11. Splitting or dividing commissions, broker's fees, or brokerage discounts, or otherwise in any manner directly or indirectly using brokerage commissions or jobbers' arrangements or sales agencies for making discounts, allowances, or rebates, or prices other than those determined under said Act, to any industrial consumer or to any retailers, or to others, whether of a like or different class.

12. Selling to, or through, any broker, jobber, commission account, or sales agency, which is in fact or in effect an agency or an instrumentality of a retailer or an industrial consumer or of an organization of retailers or industrial consumers, whereby they or any of them secure either directly or indirectly a discount, dividend, allowance, or rebates, or a price other than that determined in the manner prescribed by said Act.

13. Violations of the provisions of this code.

It shall not be an unfair method of competition or a violation of this code or any requirement of said Act (1) to sell to or through any bona fide and legitimate farmer's cooperative organization duly organized under the laws of any State, Territory, the District of Columbia, or the United States whether or not such organization grants re- [fol. 870] bates, discounts, patronage dividends, or other similar benefits to its members, (2) to sell through any intervening agency to any such cooperative organization; or (3) to pay or allow to any such cooperative organization or to any such intervening agency any discount, commission, rebate, or dividend ordinarily paid or allowed, or permitted by this code to be paid or allowed, to other purchasers for purchases in wholesale or middleman quantities.

Sec. 13. The Commission shall have jurisdiction to hear and determine written complaints made charging any violation of this code specified in this part II. It shall make and publish rules and regulations for the consideration and hearing of any such complaint, and all interested parties shall be required to conform thereto. The Commission shall make due effort toward adjustment of such complaints and shall endeavor to compose the differences of the parties, and shall make such order or orders in the premises, from time to time, as the facts and the circumstances

warrant. Any such order shall be subject to review as are other orders of the commission.

Part III—Labor Relations

Sec. 14. Employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from interference, restraint, or coercion of employers, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection; and no employee and no one seeking employment shall be required as a condition of employment to join any company union.

Sec. 15. Employees shall have the right of peaceable assemblage for the discussion of the principles of collective bargaining, shall be entitled to select their own checkweighman to inspect the weighing or measuring of coal, and shall not be required as a condition of employment to live in company houses or to trade at the store of the employer.

Sec. 16. The Labor Board shall have authority to adjudicate disputes arising under sections 14 and 15 of this part III, and to determine whether or not an organization of employees has been promoted, or is controlled or dominated by an employer in its organization, management, policy, or election of representatives; and for the purpose of determining who are the freely chosen representatives of the employees the Board may order and under its supervision may conduct an election of employees for that purpose. The Labor Board may order a code member to meet the representatives of its employees for the purpose of collective bargaining.

Sec 17. The Labor Board may offer its services as mediator in any dispute between a producer and its employees where such dispute is not determined by the tribunal set up in a bona fide collective contract; and upon the written submission by the parties requesting an award on a stated matter signed by the duly accredited representatives of the employer and employees, the Labor Board may arbitrate the matter submitted.

Sec. 18. Whenever the maximum daily and weekly hours of labor are agreed upon in any contract or contracts nego-

tiated between the producers of more than two-thirds the annual national tonnage production for the preceding calendar year and the representatives of more than one-half the mine workers employed, such maximum hours of labor shall be accepted by all the code members. The wage agreement or agreements negotiated by collective bargaining in any district or group of two or more districts, between representatives of producers of more than two-thirds of the annual tonnage production of such district or each of such districts in a contracting group during the preceding calendar year, and representatives of the majority of the mine workers therein, shall be filed with the Labor Board and shall be accepted as the minimum wages for the various classifications of labor by the code members operating in such district or group of districts.

Annex to Code—Schedule of Districts

Eastern Pennsylvania

District 1. The following counties in Pennsylvania: Bedford, Blair, Bradford, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Elk, Forest, Fulton, Huntingdon, Jefferson, Lycoming, McKean, Mifflin, Potter, Somerset, Tioga.

Armstrong County, including mines served by the P. & S. R. R. on the west bank of the Allegheny River, and north of the Conemaugh division of the Pennsylvania Railroad.

Fayette County, all mines on and east of the line of Indian Creek Valley branch of the Baltimore and Ohio Railroad.

Indiana County, north of but excluding the Saltsburg branch of the Pennsylvania Railroad between Edri and Blairsville, both exclusive.

Westmoreland County, including all mines served by the Pennsylvania Railroad, Torrance, and east.

[fol. 871] All coal-producing counties in the State of Maryland.

The following counties in West Virginia: Grant, Mineral, and Tucker.

Western Pennsylvania

District 2. The following counties in Pennsylvania: Allegheny, Beaver, Butler, Greene, Lawrence, Mercer, Venango, Washington.

Armstrong County, west of the Allegheny River and exclusive of mines served by the P. & S. R. R.

Indiana County, including all mines served on the Saltsburg branch of the Pennsylvania Railroad north of Conemaugh River.

Fayette County, except all mines on and east of the line of Indian Creek Valley branch of the Baltimore and Ohio Railroad.

Westmoreland County, including all mines except those served by the Pennsylvania Railroad from Torrance, east.

Northern West Virginia

District 3. The following counties in West Virginia: Barbour, Braxton, Calhoun, Doddridge, Gilmer, Harrison, Jackson, Lewis, Marion, Monongalia, Pleasants, Preston, Randolph, Ritchie, Roane, Taylor, Tyler, Upshur, Webster, Wetzel, Wirt, Wood.

That part of Nicholas County including mines served by the Baltimore and Ohio Railroad and north.

Ohio

District 4. All coal-producing counties in Ohio.

Michigan

District 5. All coal-producing counties in Michigan.

Panhandle

District 6. The following counties in West Virginia: Brooke, Hancock, Marshall, and Ohio.

Southern Numbered 1

District 7. The following counties in West Virginia: Greenbrier, Mercer, Monroe, Pocahontas, Summers.

Fayette County, east of Gauley River and including the Gauley River branch of the Chesapeake and Ohio Railroad and mines served by the Virginia Railway.

McDowell County, that portion served by the Dry Fork branch of the Norfolk and Western Railroad and east thereof.

Raleigh County, excluding all mines on the Coal River branch of the Chesapeake and Ohio Railroad.

Wyoming County, that portion served by the Gilbert branch of the Virginian Railroad lying east of the mouth of Skin Fork of Guyandot River and that portion served by the main line and the Glen Rogers branch of the Virginian Railroad.

The following counties in Virginia: Montgomery, Pulaski, Wythe, Giles, Craig.

Tazewell County, that portion served by the Dry Fork branch to Cedar Bluff and from Bluestone Junction to Boissevain branch of the Norfolk and Western Railroad and Richlands-Jewell Ridge Branch of the Norfolk and Western Railroad.

Buchanan County, that portion served by the Richlands-Jewell Ridge branch of the Norfolk and Western Railroad and that portion of said county on the head waters of Dismal Creek, east of Lynn Camp Creek (a tributary of Dismal Creek).

Southern Numbered 2

District 8. The following counties in West Virginia: Boone, Clay, Kanawha, Lincoln, Logan, Mason, Mingo, Putnam, Wayne, Cabell.

Fayette County, west of, but not including mines of the Gauley River branch of the Chesapeake and Ohio Railroad.

McDowell County, that portion not served by and lying west of the Dry Fork branch of the Norfolk and Western Railroad.

Raleigh County, all mines on the Coal River branch of the Chesapeake and Ohio Railroad and north thereof.

Nicholas County, that part south of and not served by the Baltimore and Ohio Railroad.

Wyoming County, that portion served by Gilbert branch of the Virginian Railroad lying west of the mouth of Skin Fork of Guyandot River.

The following counties in Virginia: Dickinson, Lee, Russell, Scott, Wise.

All of Buchanan County, except that portion on the head waters of Dismal Creek, east of Lynn Camp Creek (tributary of Dismal Creek) and that portion served by the Richlands-Jewell Ridge branch of the Norfolk and Western Railroad.

Tazewell County, except portions served by the Dry Fork branch of Norfolk and Western Railroad and branch from

Bluestone Junction to Boissevain of Norfolk and Western Railroad and Richlands-Jewell Ridge branch of the Norfolk and Western Railroad.

[fol. 872] The following counties in Kentucky: Bell, Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Greenup, Harlan, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Letcher, Leslie, McCreary, Magoffin, Martin, Morgan, Owsley, Perry, Pike, Rockcastle, Wayne, Whitley.

The following counties in Tennessee: Anderson, Campbell, Claiborne, Cumberland, Fentress, Morgan, Overton, Roane, Scott.

The following counties in North Carolina: Lee, Chatham, Moore.

West Kentucky

District 9. The following counties in Kentucky: Butler, Christian, Crittenden, Daviess, Hancock, Henderson, Hopkins, Logan, McLean, Muhlenberg, Ohio, Simpson, Todd, Union, Warren, Webster.

Illinois

District 10. All coal-producing counties in Illinois.

Indiana

District 11. All coal-producing counties in Indiana.

Iowa

District 12. All coal-producing counties in Iowa.

Southeastern

District 13. All coal-producing counties in Alabama.

The following counties in Georgia: Dade, Walker.

The following counties in Tennessee: Marion, Grundy, Hamilton, Bledsoe, Sequatchie, White, Van Buren, Warren, McMinn, Rhea.

Arkansas-Oklahoma

District 14. The following counties in Arkansas: All counties in the State.

The following counties in Oklahoma: Haskell, Le Flore, Sequoyah.

Southwestern

District 15. All coal-producing counties in Kansas. All coal-producing counties in Texas. All coal-producing counties in Missouri.

The following counties in Oklahoma: Coal, Craig, Latimer, Muskogee, Okmulgee, Pittsburg, Rogers, Tulsa, Wagoner.

Northern Colorado

District 16. The following counties in Colorado: Adams, Araphahoe, Boulder, Douglas, Elbert, El Paso, Jackson, Jefferson, Larimer, Weld.

Southern Colorado

District 17. The following counties in Colorado: All counties not included in northern Colorado district.

The following counties in New Mexico: All coal-producing counties in the State of New Mexico, except those included in the New Mexico district.

New Mexico

District 18. The following counties in New Mexico: Grant, Lincoln, McKinley, Rio Arriba, Sandoval, San Juan, San Miguel, Santa Fe, Socorro.

Wyoming

District 19. All coal-producing counties in Wyoming.

Utah

District 20. All coal-producing counties in Utah.

North Dakota-South Dakota

District 21. All coal-producing counties in North Dakota. All coal-producing counties in South Dakota.

Montana

District 22. All coal-producing counties in Montana.

Washington

District 23. All coal-producing counties in Washington.

Approved, August 30, 1935.
Dated this 9th day of October, 1935.
National Bituminous Coal Commission, by C. F. Hosford, Jr., Chairman; George E. Acret, Walter H. Maloney, C. E. Smith, Percy Tetlow, Commissioners. (Seal.)

[fol. 873] PLAINTIFFS' EXHIBIT 16

United States Department of the Interior

National Bituminous Coal Commission, Washington, D. C.

General Order No. 2

An Order Providing the Form of Acceptance of the Bituminous Coal Code

Pursuant to authority contained in Act of Congress, entitled "Bituminous Coal Conservation Act of 1935", it is hereby ordered, for the purposes, and to be effective as, contemplated by said Act, that the form of acceptance for membership in the Bituminous Coal Code, formulated and prescribed by this Commission, in its General Order No. 1, on the 9th day of October, 1935, shall be as follows:

Acceptance of Membership in the Bituminous Coal Code

The undersigned, bituminous coal producers, hereby accepts the Bituminous Coal Code, formulated and prescribed October 9, 1935, by the National Bituminous Coal Commission, in General Order No. 1 of said Commission, pursuant to and under the provisions of an Act of Congress, entitled "Bituminous Coal Conservation Act of 1935."

Neither this acceptance, nor compliance with the provisions of said Code, nor acceptance of the drawback provided by said Act, shall be held to preclude or estop the undersigned from contesting the constitutionality of any provision of said Code or of said Act, or the validity thereof as applicable to the undersigned, in any proceeding authorized by

said Act or any other appropriate proceeding at law or in equity.

Dated this —day of ——, 193-.

.....(Seal.)
.....(Seal.)
.....(Seal.)

(NOTE.—The above form of acceptance may not be altered by the acceptors in any respect whatsoever and must be signed and acknowledged before an officer qualified to administer an oath. When in behalf of a partnership, it must be signed and acknowledged by a partner thereof, and in behalf of a corporation, by the president or vice president, and attested by the secretary or assistant secretary. A form of acknowledgment conformable to the laws of the state in which the acceptance is executed shall be thereto attached.)

The above form of acceptance shall be known as "Form 1", and, if the producer desires to accept the Code, must be signed and acknowledged in triplicate, one triplicate original to be filed with the National Bituminous Coal Commission at Washington, D. C., another with the District Board Secretary, and another retained in the files of the producer. Said acceptance shall become effective only when properly executed and filed with the Commission at Washington, D. C.

Dated this 9th day of October, 1935.

National Bituminous Coal Commission, by C. F. Hosford, Jr., Chairman; George E. Acret, Walter H. Maloney, C. E. Smith, Percy Tetlow, Commissioners. (Seal.)

[fol. 874] PLAINTIFF'S EXHIBIT 17

United States Department of the Interior

National Bituminous Coal Commission, Washington, D. C.

General Order No. 3

An Order Providing for the Organization of the District Boards

Pursuant to authority contained in Act of Congress, entitled "Bituminous Coal Conservation Act of 1935", it is

hereby ordered by the National Bituminous Coal Commission, in regular meeting assembled, as follows:

1. District boards of coal producers shall be forthwith organized pursuant to the provisions of said Bituminous Coal Conservation Act of 1935 and in conformity with the provisions of this order.

2. The following are hereby appointed acting deputy district secretaries for this Commission in their respective districts:

Districts	Name	Address
1	W. A. Jones	c/o Central Pennsylvania Coal Producers Association, Altoona, Pennsylvania.
2	B. H. Canon	Oliver Building, Pittsburgh, Pennsylvania.
3	T. J. Ashcraft	P. O. Box 1164, Fairmont, West Virginia.
4	Ezra Van Horn	Rockefeller Bldg., Cleveland, Ohio.
5	Warren E. Pippin	Graebner Building, Saginaw, Michigan.
6	Geo. A. Blackford	500 Board of Trade Building, Wheeling, West Virginia.
7	C. E. Bockus	75 West Street, New York City.
8	P. M. Snyder	Mt. Hope, West Virginia
9	C. E. Reed	Starks Bldg., Louisville, Kentucky.
10	Fred Wilkey	309 West Jackson Blvd., Chicago, Ill.
11	Jonas Waffle	Opera House Block, Terre Haute, Ind.
12	M. G. Youngquist	Polk Bldg., Des Moines, Iowa.
13	James L. Davidson	Webb Crawford Building, Birmingham, Ala.
14	S. A. Bramlette	Merchants National Bank Building, Fort Smith, Arkansas.
15	W. E. Blucher	540 Dwight Building, Kansas City, Mo.
16	N. C. Brooks	508 Sugar Building, Denver, Colorado.
17	F. O. Sandstrom	Boston Building, Denver, Colorado.

[fol. 875]

18	A. R. Litts	Box 623, Albuquerque, New Mexico.
19	L. W. Mitchell	610 Boyd Blvd., Cheyenne, Wyoming.
20	B. P. Manley	Ezra Thompson Building, Salt Lake City, Utah.
21	E. M. Hendricks	307 Broadway, Bismarck, North Dakota.
22	M. F. Purcell	c/o Montana Coal Operators Association, Billings, Montana.
23	D. S. Hanley	Chamber of Commerce Building, Seattle, Washington.

The appointment of an acting deputy district secretary shall be effective upon his taking and signing an oath of office before a notary public or other officer qualified to administer an oath.

3. Each of such acting deputy district secretaries shall serve without compensation but shall be reimbursed by his district board, when such district board shall be organized, for his actual expenses incurred in complying with this order.

4. Each of the above named acting deputy district secretaries shall accept his appointment by telegraphing, prepaid, to this Commission at Washington, D. C., such acceptance within 24 hours of the receipt of this order, stating therein the date, hour, and place of such meeting and the quantity of forms required for his use in organizing his district in conformity with this order. The Commission reserves the right, at any time, to revoke the appointment of any acting deputy district secretary without prior notice or hearing.

5. The duties of an acting deputy district secretary shall be as follows:

(a) To fix the time and place of a meeting for the organization of the district board in conformity with the provisions of this order and of said Act, such meeting to be held within 15 days of the date of the receipt of this order.

(b) To give notice, in the manner and form herein provided, of the time and place of such meeting to all known bituminous coal producers in his district, and to make distribution of all forms as required by this order.

(c) To call said meeting to order at the time and place fixed in said notice.

(d) To receive and safely keep for delivery to the district board, when organized, all proxies and tonnage affidavits herein provided for and, prior to the meeting, to list and arrange such proxies and affidavits in a manner such as to best facilitate their use at the meeting.

(e) To act as temporary chairman of said meeting and to do such other things as the Commission may by its subsequent instructions or orders direct.

(f) Within five days after said meeting, to file with the Commission at Washington, D. C., a full report of the proceedings of said meeting, together with proof of service and proof of publication of said notice in conformity with the requirements of this order, and upon the filing of such report the appointment of such acting deputy district secretary shall terminate.

[fol. 876] 6. The notice of said meeting shall be in the form attached to this order, marked "Form 2," and made a part hereof.

7. Not less than ten days prior to the day fixed for said meeting, said notice shall be published once in a newspaper of general circulation in the district, and; not less than ten days prior to the day fixed for said meeting, a copy of said notice upon said Form 2 shall be mailed, postage prepaid, to all known bituminous coal producers in the district, together with a copy of General Orders No. 1, 2, and 3, and; in triplicate, Forms 1, 4, and 5.

8. Proof of service of said notice shall be made in the form attached to this order, marked "Form 3," and made a part hereof. Proof of publication of said notice shall be made by affidavit of the publisher of the newspaper in a form customary in the district.

9. Qualified coal producers, as defined in this order, and properly represented at the meeting, shall proceed to a determination of the number of members to comprise the district board in accordance with the provisions of Sub-Section (a) of Part I of Section 4 of said Act. Thereafter, an election of members of the district board shall be proceeded with as provided in said Section 4 and in this order, provided: That one vacancy shall be left in the total number of members of the board, such vacancy to be thereafter filled by selection by an organization of employees as provided in said Act, and provided further: That the number of members elected at the meeting shall be an even number.

10. Each qualified coal producer may attend said meeting and vote in person, or by proxy, in the manner provided in said Act.

11. All proxies shall be in the form attached to this order, marked "Form 4", and made a part hereof, and shall be in fact filed with the acting deputy district secretary not less than 48 hours prior to the date and hour fixed for said meeting. No proxies shall under any circumstances have any validity which shall not have been so filed.

12. A producer may not vote by proxy or otherwise unless he be a qualified producer. A qualified producer, within the meaning of this order, shall be a producer, as defined in Section 19 of said Act, who, 48 hours prior to the date and hour of said meeting, has performed each of the following acts: (a) Mailed to the Commission at Washington, D. C.,

his or its acceptance of the Bituminous Coal Code, duly executed, on Form 1, pursuant to General Order No. 1 of the Commission. (b) Filed with (actually in the possession of) the acting deputy district secretary, for his delivery to the secretary of the district board when elected, a duplicate original of said acceptance. (c) Filed, in duplicate, with the acting deputy district secretary, an affidavit of tonnage in the form hereinafter provided, sworn to before an officer qualified to administer an oath.

13. The affidavit of tonnage above referred to shall be executed in duplicate and made upon the form attached hereto, marked "Form 5", and made a part hereof. One duplicate original of the affidavit of tonnage received by the acting deputy district secretary shall be filed with the Commission at Washington, D. C., and the other duplicate original delivered to the secretary of the district board when elected.

14. No producer, who shall not be a qualified producer as herein provided, shall have any vote or voice at said meeting, or right to the floor thereof.

15. Following the election of the members of the district board, the board shall proceed to organize as promptly as possible, and shall transmit to the Commission, for its con- [fol. 877] sideration and approval, a full report of said meeting, which report shall be duly certified. Said report shall include such information as will inform the Commission as to whether or not members of said board are truly representative of all the mines of the district, as provided in Section 4, Part I, Sub-Section (a) of said Act, and as to whether or not said meeting was held in a locality suitable to the convenience of a majority of the producers of the district.

16. District boards, immediately following said meeting, shall levy an initial assessment upon all those subject to their jurisdiction, as provided in said Act, each paying his proportionate share computed on the basis of his tonnage for the calendar year 1934, and thereafter shall levy quarterly assessments upon the same, each paying his proportionate share computed on the basis of his tonnage for the preceding quarter.

17. District boards, when organized, shall be known as "Bituminous Coal Producers Board for District No. —".

18. No district board organized at a meeting called, notice, or held prior to the date of the issuance of this order, or organized other than in conformity therewith, will be recognized by the Commission.

Dated this 9th day of October, 1935.

National Bituminous Coal Commission, by C. F. Hosford, Jr., Chairman; George E. Acret, Walter H. Maloney, C. E. Smith, Percy Tetlow, Commissioners. (Seal.)

Attest: N. W. Roberts, Secretary.

[fol. 878] Form 1

United States Department of the Interior

National Bituminous Coal Commission, Washington, D. C.

Name of Producer .....
Post Office Address .....
District No. .....

Acceptance of Membership in the Bituminous Coal Code

The undersigned, bituminous coal producer, hereby accepts the Bituminous Coal Code, formulated and prescribed October 9, 1935, by the National Bituminous Coal Commission, in General Order No. 1 of said Commission, pursuant to and under the provisions of an Act of Congress, entitled "Bituminous Coal Conservation Act of 1935."

Neither this acceptance, nor compliance with the provisions of said Code, nor acceptance of the drawback provided by said Act, shall be held to preclude or estop the undersigned from contesting the constitutionality of any provision of said Code or of said Act, or the validity thereof as applicable to the undersigned, in any proceeding authorized by said Act or any other appropriate proceeding at law or in equity.

Dated this — day of ——, 193-.

..... (Seal.)
..... (Seal.)
..... (Seal.)

(NOTE.—The above form of acceptance may not be altered by the acceptors in any respect whatsoever and must be signed and acknowledged before an officer qualified to administer an oath. When in behalf of a partnership it must be signed and acknowledged by a partner thereof, and in behalf of a corporation, by the president or vice president, and attested by the secretary or assistant secretary. A form of acknowledgment conformable to the laws of the state in which the acceptance is executed shall be thereto attached.)

Attention is called to the fact that, pursuant to Paragraph 12 of General Order No. 3, an executed and acknowledged duplicate original of the above form must be mailed to the Commission at Washington, D. C., and an executed and acknowledged duplicate original thereof must be filed with (actually in the possession of) the acting deputy district secretary at least 48 hours prior to the date and hour fixed for the District Board meeting.

[fol. 879] Form 2

United States Department of the Interior

National Bituminous Coal Commission, Washington, D. C.

Notice to Bituminous Coal Producers of District Board Organization Meeting

Notice is hereby given to all producers of bituminous coal in District No. —, as defined by Act of Congress, entitled "Bituminous Coal Conservation Act of 1935," that:

A meeting will be held at ..... o'clock ... M., on the .... day of ....., 193.., at .....

.....

for the above named District No. ....., as defined by the said Act, of all qualified producers of bituminous coal, for the purpose of determining the number of members of a district board and for the election of its members, as the same is provided for in the said Act, and to consider and pass upon such other matters as may lawfully come before said meeting under the provisions of said Act.

Only qualified producers, as defined in General Order No. 3 of the National Bituminous Coal Commission, shall

be entitled to participate in the said meeting and vote therein. Copies of General Orders No. 1, 2, and 3, and of Forms 1, 4, and 5, of said Commission may be procured from the undersigned Deputy at the address below stated.

All qualified producers voting by proxy must comply with said General Order No. 3.

Dated this — day of October, 193-.

.....

Acting Deputy District Secretary of the National Bituminous Coal Commission.

Address: .....

.....

Instructions to Acting Deputy District Secretaries

(Not to be Included in Notice Published in the Newspaper)

A copy of the above notice and of General Orders No. 1, 2, and 3, and the following Forms of the Commission: in duplicate, Form 4, and in triplicate, Forms 1 and 5, shall be mailed to all known producers in the district in accordance with the provisions of said General Order No. 3.

[fol. 880] Form 3

United States Department of the Interior

National Bituminous Coal Commission

Affidavit of Service of Notice of Organization Meeting of District Board

State of ——,

County of ——, ss:

—— ——, being duly sworn under oath, deposes and says that he is the acting deputy district secretary of the National Bituminous Coal Commission for District No. —, as defined by Act of Congress, entitled "Bituminous Coal Conservation Act of 1935"; that he served a copy of the notice hereto attached upon all known bituminous coal producers in said district by depositing a copy of said notice in the United States mail, addressed to each of said producers.

The date or dates upon which said respective notices were mailed, and the names and addresses of said respec-

tive producers are set forth on pages — to —, inclusive, marked "Exhibit A", hereto attached, and by reference made a part hereof.

—— —— (Seal.)

Sworn and subscribed before me this — day of ——, 193-.

——— ———.

(Title of officer administering oath.)

Exhibit A

Date Notice Mailed	Name of Producer	Address to Which Mailed

[fol. 881] Form 4

United States Department of the Interior

National Bituminous Coal Commission, Washington, D. C.

Proxy for Organization Meeting of District Boards

State of .....,
County of ....., ss:

The undersigned, a coal producer in District No. ...., as defined by the Bituminous Coal Conservation Act of 1935, having become a qualified producer on the .... day of ....., 1935, in conformity with General Order No. 3 of the National Bituminous Coal Commission, does hereby make, constitute, and appoint ..... his, her, or its true and lawful proxy and attorney, to attend the organization meeting of the bituminous coal producers of the said district, to be held at ..... o'clock, ... M., on the .... day of ....., 1935, and any adjournment or adjournments of the said meeting, and there to cast any and all votes the undersigned could or would cast, if personally present, in creating the district board and voting upon any and all matters necessary thereto and properly coming before the said meeting; hereby ratifying and confirming any

and all lawful acts of the said proxy and attorney done in conformity herewith.

In witness whereof the undersigned has caused these presents to be duly executed this .... day of ....., 193..

..... (Seal.)

(NOTE.—The above proxy must be signed and acknowledged before an officer qualified to administer an oath. When in behalf of a partnership it must be signed and acknowledged by a partner thereof, and when in behalf of a corporation, by the president, vice president, or secretary thereof. A form of acknowledgment conformable to the laws of the state in which the proxy is executed shall be thereto attached.)

Attention is called to the fact that, if the producer desires to vote by proxy at the organization meeting of the District Board, an executed and acknowledged original of this form must be filed with (actually in the possession of) the acting deputy district secretary at least 48 hours prior to the date and hour fixed for the District Board meeting, pursuant to Paragraph 11 of General Order No. 3.

[fol. 882] Form 5

United States Department of the Interior

National Bituminous Coal Commission, Washington, D. C.

Affidavit of Tonnage

State of .....,
County of ....., ss:

....., being duly sworn on oath, deposes and says that he makes this Affidavit of Tonnage pursuant to General Order No. 3 of the National Bituminous Coal Commission, dated the 9th day of October, 1935, and that he is ..... of .....
(Individual proprietor, copartner, president, etc.) (Name of producer.)

..... a .....;
(Whether an individual, copartnership, or corporation.)

that said producer is now operating one or more bituminous coal mines located in District No. ...., as designated

in Act of Congress, entitled "Bituminous Coal Conservation Act of 1935"; that during the calendar year 1934 said producer actually produced bituminous coal from a mine or mines, owned, leased, or operated by ....., within
(him, her, it)
said District, the names of which mine or mines, the respective locations thereof, and the actual number of tons of bituminous coal produced therefrom during said calendar year, being as follows, to wit:

Name of Mine	Location of Mine	1934 Tonnage of Mine
.....	.....	.....
.....	.....	.....

Affiant hereby certifies that he has mailed to the Commission, at Washington, D. C., in behalf of said producer, an acceptance of the Bituminous Coal Code, duly executed, on Form 1, pursuant to the requirements of General Order No. 3 of the Commission, and that the representations and facts aforesaid are true and correct upon ..... personal
(his, her)
knowledge thereof.

..... (Seal.)

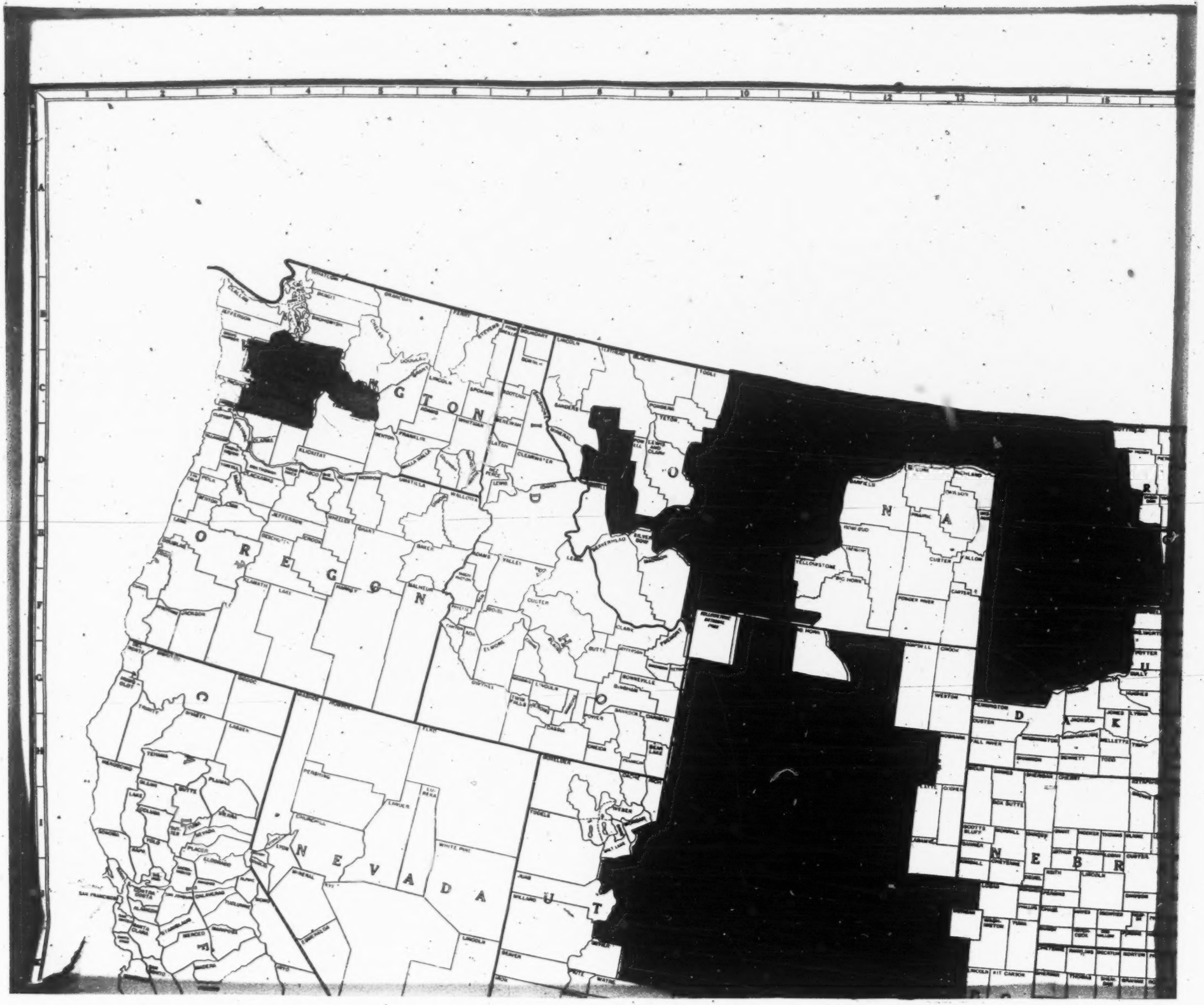
Sworn and subscribed before me this .... day of ..... 193..

.....
(Title of officer administering oath.)

(NOTE.—The above affidavit, when made in behalf of a partnership, must be made by one of the partners thereof; when in behalf of a corporation it must be made by either the president, vice president, or secretary thereof. This affidavit must be filed, in duplicate, with the acting deputy district secretary not later than 48 hours prior to the date and hour of the organization meeting provided in General Order No. 3 of said Commission. The acting deputy district secretary shall transmit one of such duplicate originals to the Commission at Washington, D. C. and the other to the secretary of the district board, when elected.)

Attention is called to the fact that, pursuant to Paragraph 12 of General Order No. 3, two executed and acknowledged duplicate originals of the above form must be filed with (actually in the possession of) the acting deputy district secretary at least 48 hours prior to the date and hour fixed for the District Board meeting.

(Here follows 1 map, folio 883, 1 photo, folio 884, 1 map folio 885)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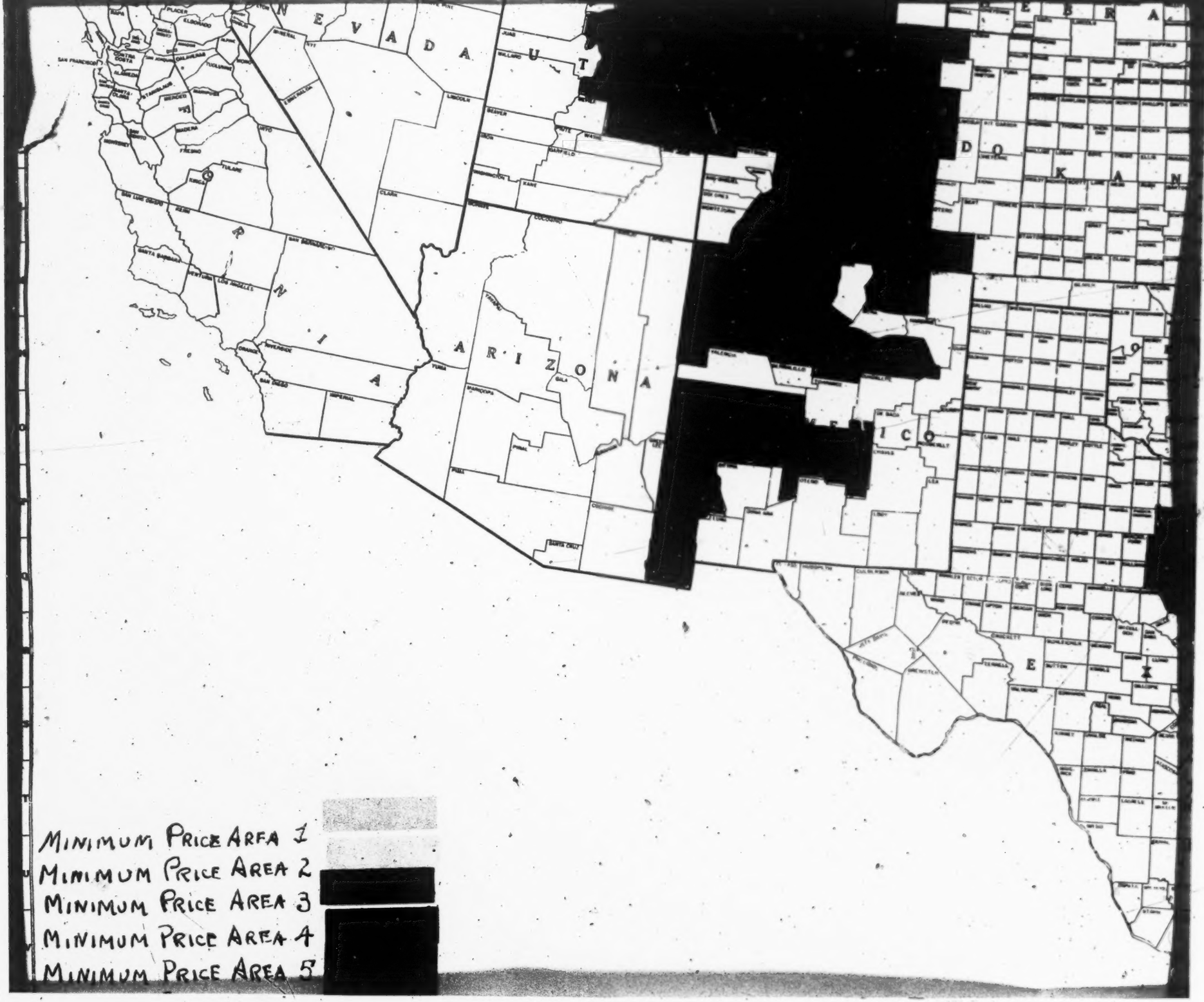
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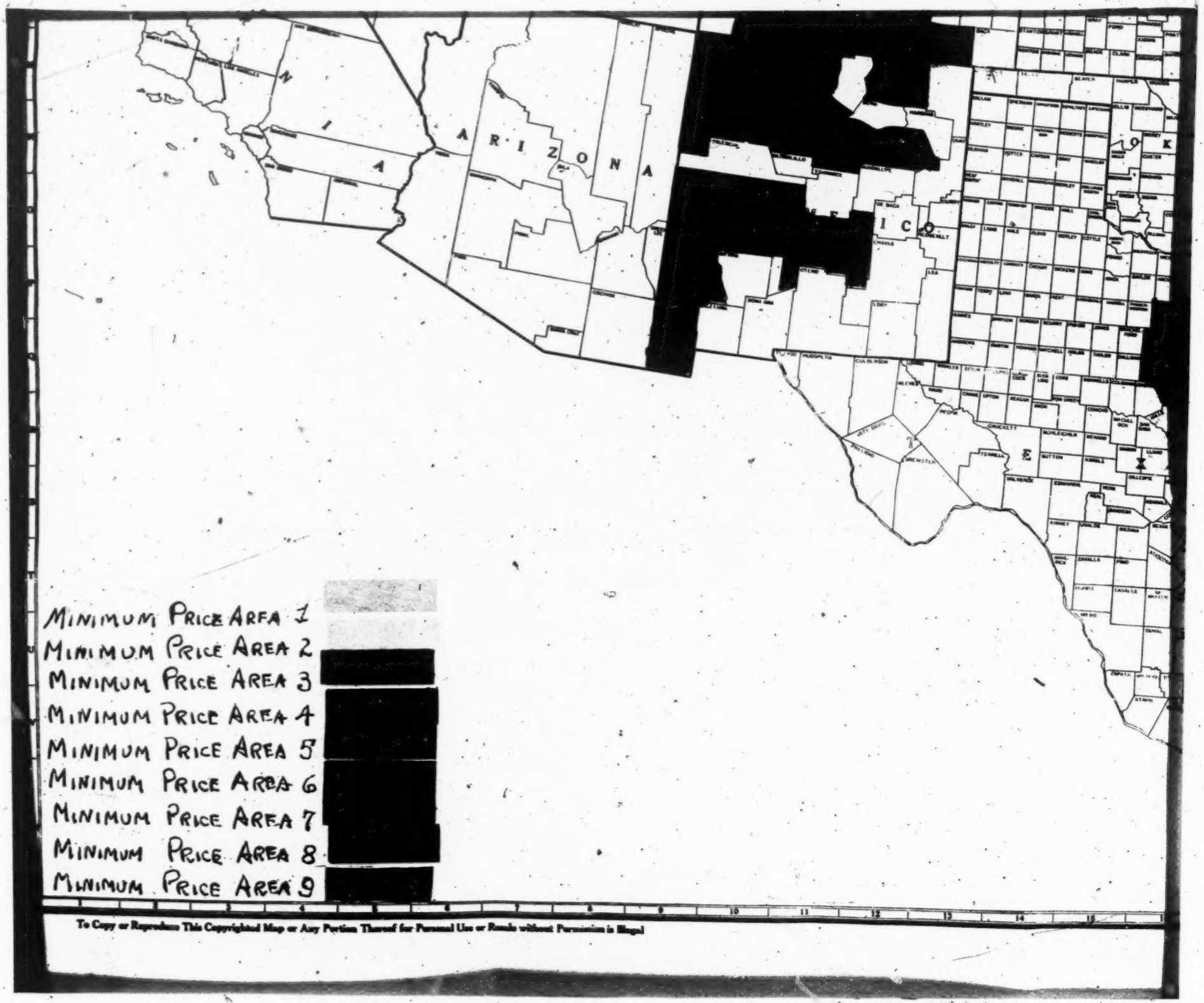

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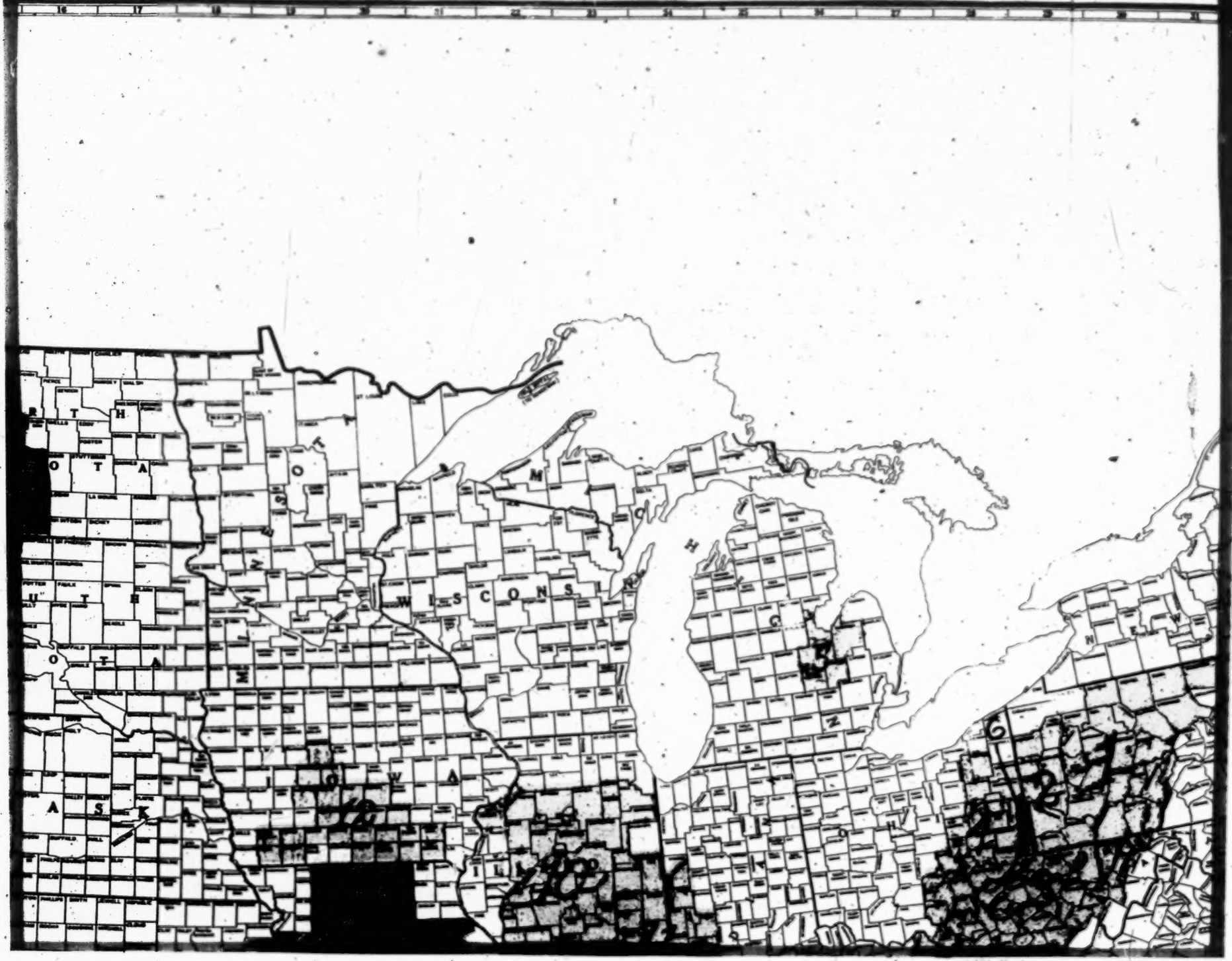
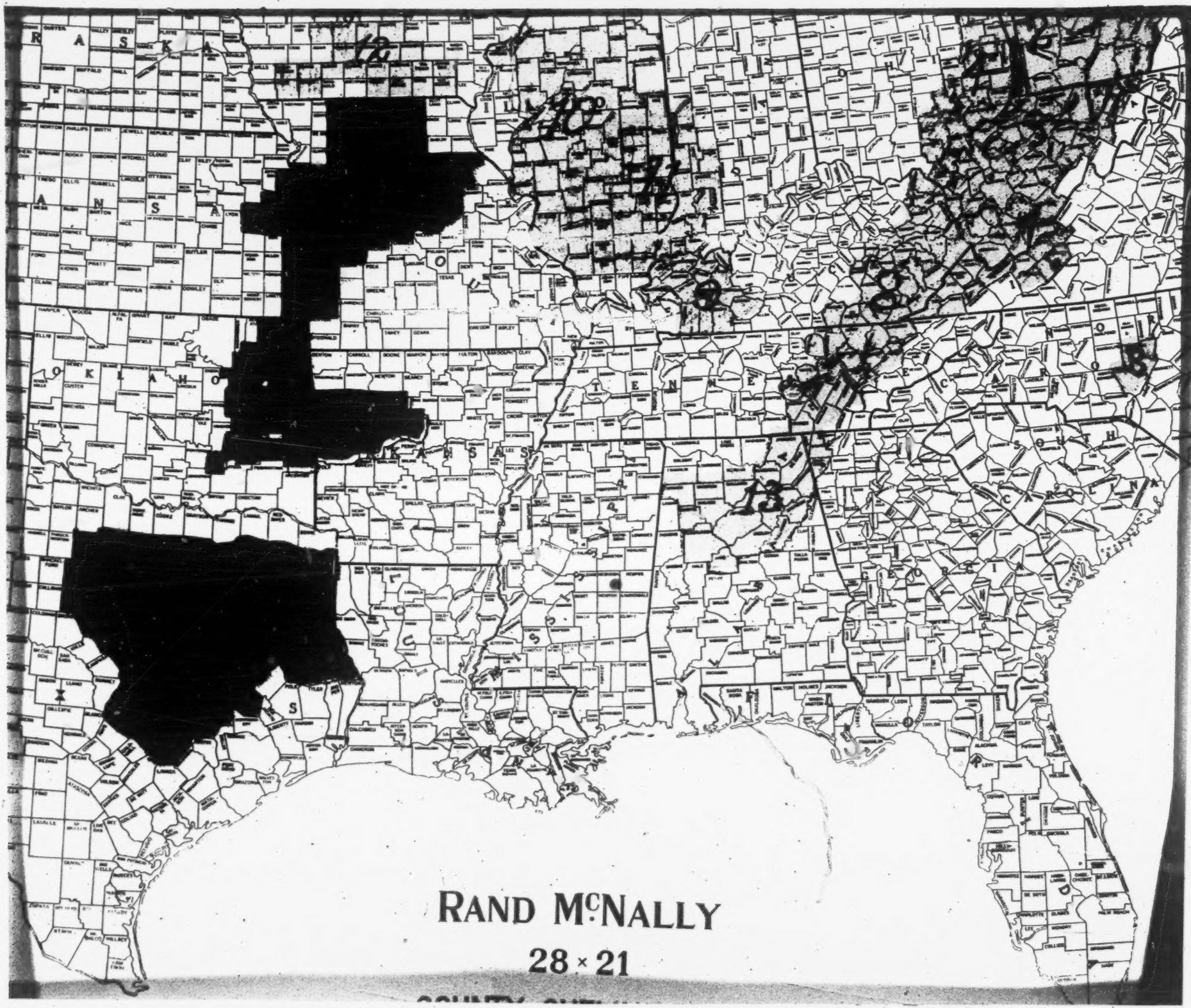
Defendant's Exhibit No. 18




RAND McNALLY
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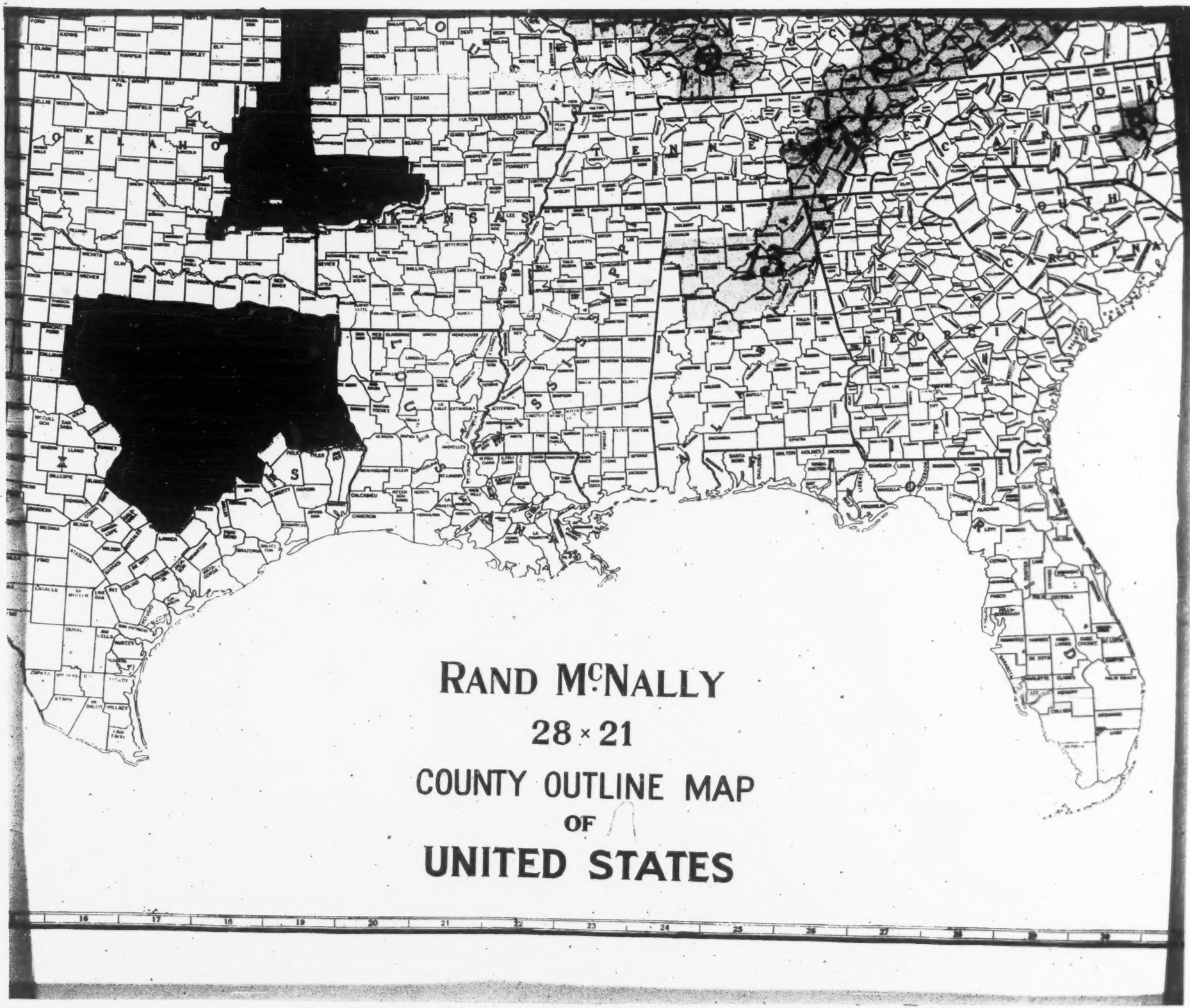
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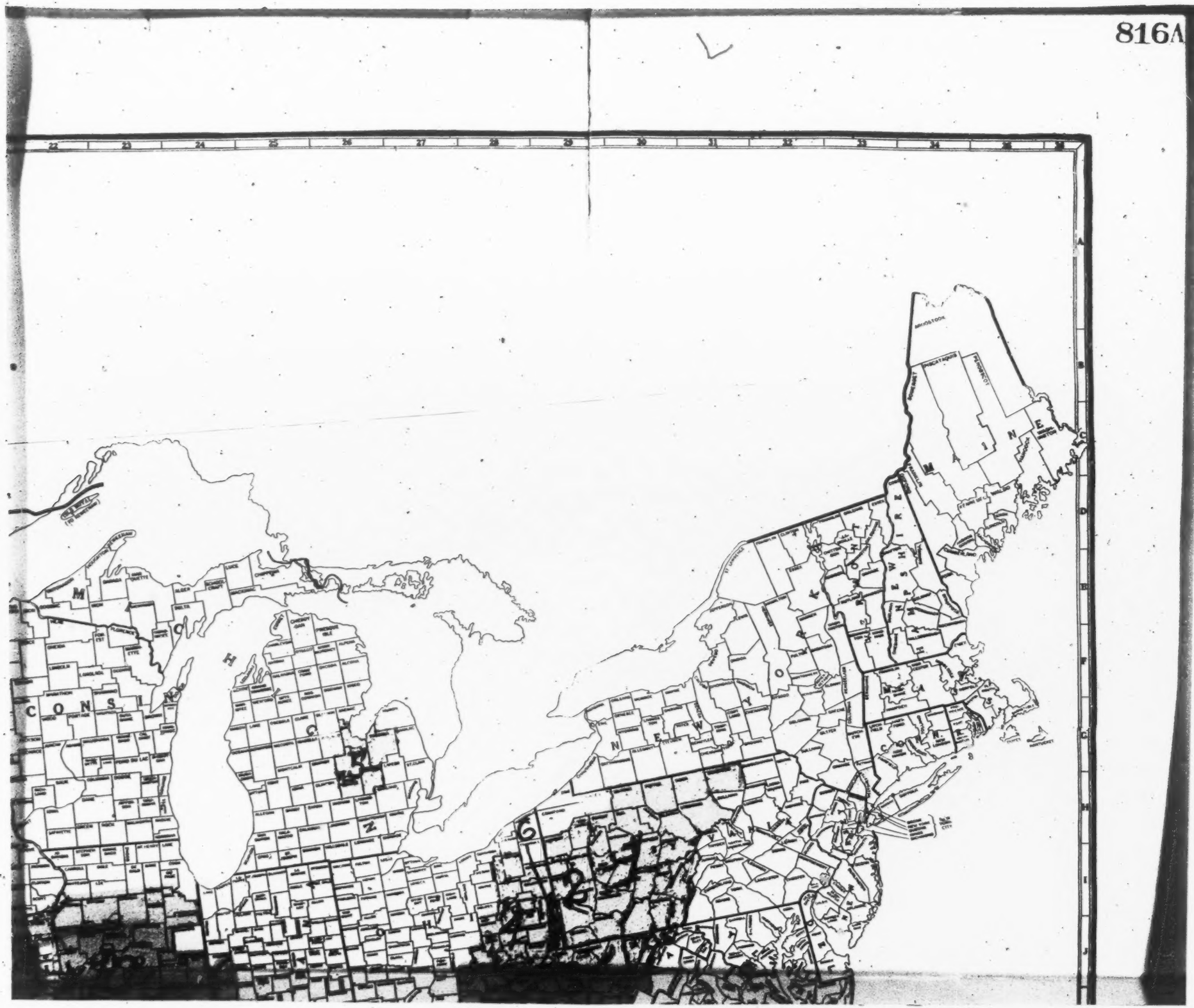
COUNTY OUTLINE MAP
OF
UNITED STATES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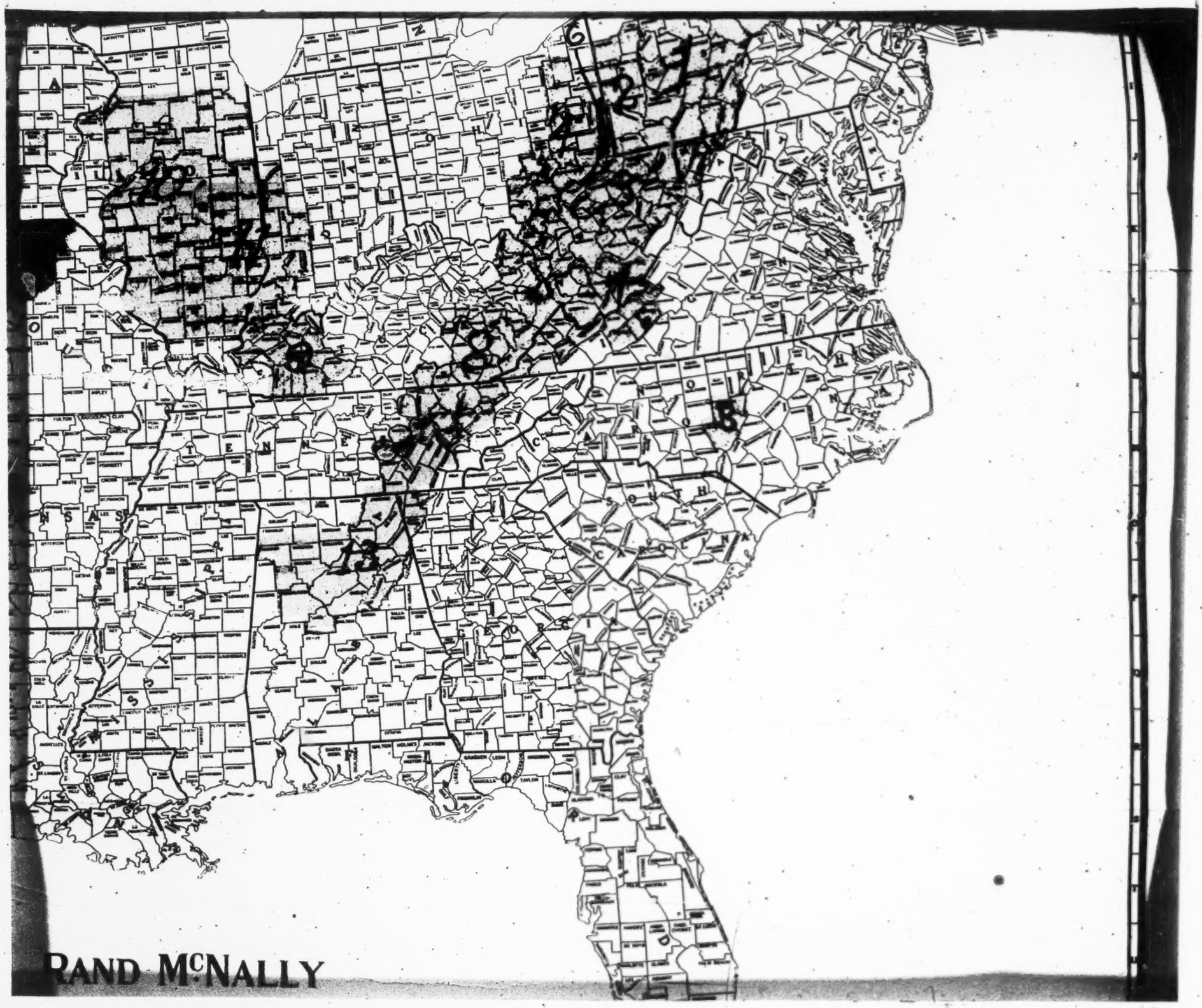
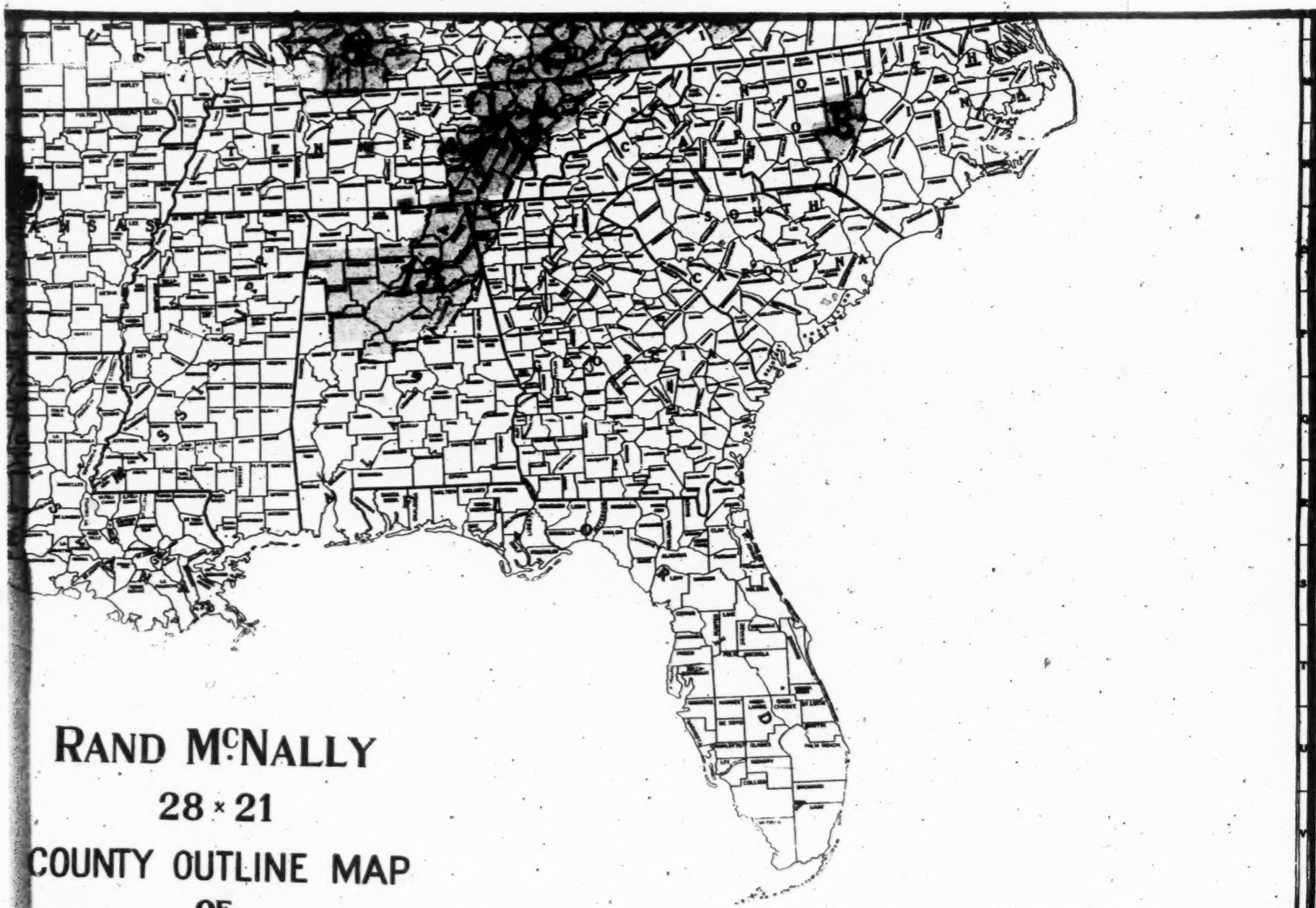

RAND McNALLY



RAND McNALLY

28 × 21

COUNTY OUTLINE MAP

OF

UNITED STATES

7732-10-29

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Plaintiff's Exhibit No. 19

#1325

No. W.C.B. 953

PRODUCTION OF BITUMINOUS COAL, BY DISTRICTS, AS DEFINED IN THE BITUMINOUS COAL CONSERVATION ACT OF 1935, 1925 TO 1934 (IN THOUSANDS OF NET TONS)

(This table was compiled for the convenience of the National Bituminous Coal Commission and is published, as a service to the industry, with the authorization of the Commission, which is not, however, responsible for its accuracy. The producing records courteously supplied by mine operators to the U. S. Bureau of Mines have been grouped to correspond as closely as possible with the district boundaries specified in the Bituminous Coal Conservation Act of 1935. The allocation of mines to some of the districts may be revised slightly as a result of interpretation by the Commission. The production for North Carolina has been included in District 8 instead of in District 7 in order to follow the provisions of the Act. For a description of the boundaries see Annex to Act - Schedule of Districts.

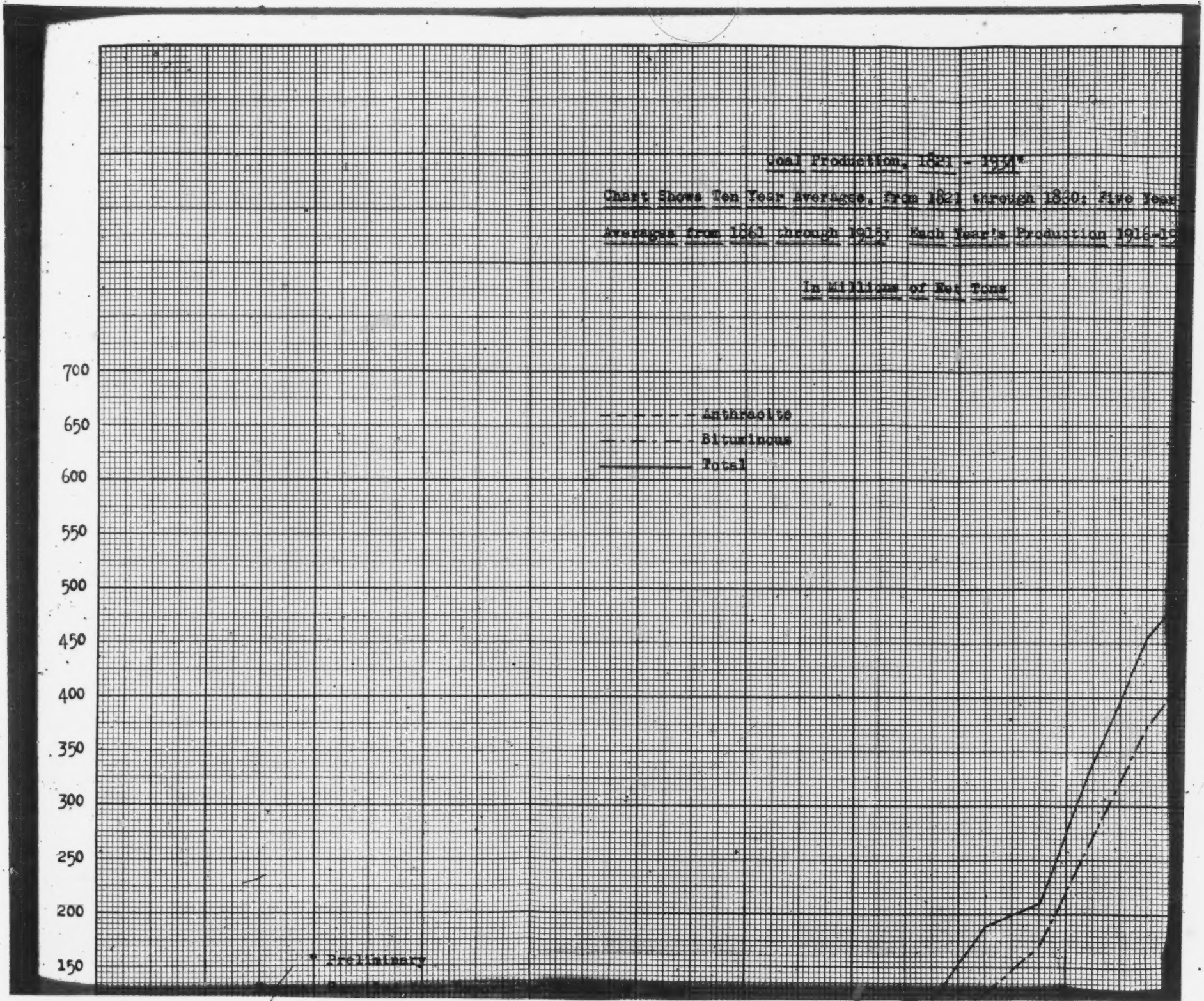
All figures for 1934 are preliminary and subject to revision upon receipt of final reports from all operators, which will be available November 1. The preliminary figures are largely based on reports from the old divisional code authorities, as in the case of Alabama and Southeastern Tennessee. See Weekly Coal Report No. 329, pages 3 and 4.)

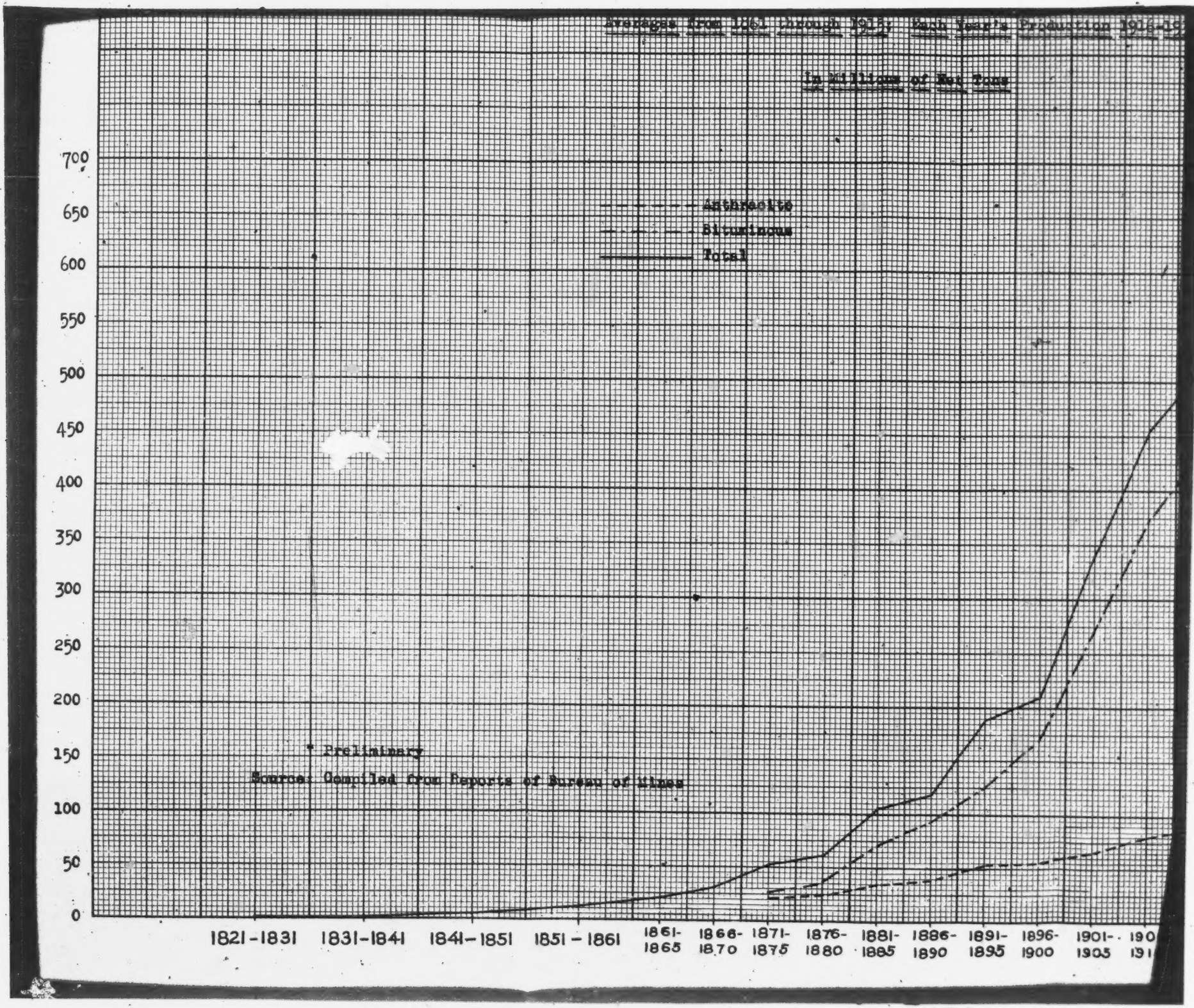
Minimum Price Area and Producing District	1925		1926		1927		1928		1929		1930		1931		1932		1933		1934 — preliminary	
	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total	Thousands of net tons	Percent of total
PRICE AREA 1																				
District 1. Eastern Pennsylvania	55,388	10.77	61,344	10.70	59,459	10.52	51,082	10.20	53,992	10.09	48,960	10.38	42,982	11.06	33,575	10.84	35,457	10.64	37,778	10.35
District 2. Western Pennsylvania	89,087	16.96	96,319	16.80	89,876	16.00	84,071	16.79	93,597	17.48	79,410	16.99	58,370	15.27	47,375	14.61	49,067	14.72	57,891	15.84
District 3. Northern West Virginia	26,682	5.17	28,322	4.92	32,723	5.80	30,898	6.17	30,210	5.65	29,734	6.31	20,819	5.45	16,773	5.17	18,989	5.69	19,115	5.23
District 4. Ohio	28,098	5.45	27,272	4.86	25,800	3.05	25,401	5.13	23,689	4.43	22,892	4.87	20,811	5.45	15,818	4.88	15,799	4.73	20,842	5.61
District 5. Michigan	888	.17	857	.15	757	.15	617	.12	805	.15	661	.14	598	.16	466	.14	417	.12	631	.18
District 6. Peninsula of West Virginia	5,988	1.15	6,595	1.15	7,137	1.38	7,212	1.46	6,335	1.18	5,114	1.09	4,096	1.06	3,837	1.16	4,038	1.09	3,982	1.11
District 7. Southern Hundred 1	57,736	11.22	59,361	10.36	58,459	10.32	52,087	10.49	57,385	10.98	51,373	10.98	43,737	11.36	36,938	11.38	41,888	12.03	44,136	12.32
District 8. Southern Hundred 2	100,469	19.51	112,988	19.72	113,812	19.98	103,429	20.66	106,957	19.73	93,845	19.98	74,739	20.09	57,680	17.76	67,963	19.52	72,929	20.37
District 9. West Kentucky	12,157	2.36	15,965	2.79	15,805	2.79	16,277	3.25	14,457	2.76	10,915	2.34	6,579	1.65	5,580	1.72	7,258	2.09	7,893	2.20
District 10. Illinois	61,959	12.04	69,967	12.20	65,988	11.59	55,988	11.17	60,658	11.58	53,731	11.49	45,397	11.69	33,478	10.31	38,213	10.99	40,905	11.41
District 11. Indiana	21,265	4.08	23,162	4.04	17,576	3.08	16,578	3.27	18,344	3.43	15,868	3.39	13,494	3.46	13,758	4.23	14,761	4.13	16,828	4.34
District 12. Iowa	4,715	.92	4,825	.85	4,948	.87	4,820	.96	4,820	.90	4,823	1.03	3,982	1.02	3,982	1.23	4,195	1.17	3,985	1.03
Total, Price Area 1 1/	455,475	87.66	506,980	88.42	491,877	87.28	437,398	87.34	469,990	87.63	411,696	88.05	337,303	88.38	272,960	88.80	296,622	88.51	329,889	89.89
PRICE AREA 2																				
District 13. Southeastern 1/	21,278	4.09	22,352	3.90	21,033	4.06	18,899	3.77	19,229	3.59	16,682	3.57	12,998	3.40	8,705	2.82	9,779	2.93	10,599	2.96
PRICE AREA 3																				
District 14. Arkansas-Oklahoma	1,600	.31	1,573	.34	2,156	.42	2,379	.47	2,529	.47	2,132	.46	1,673	.44	1,365	.47	1,313	.39	1,388	.39
PRICE AREA 4																				
District 15. Southwestern	10,173	1.95	10,865	1.89	11,095	2.13	10,508	2.10	11,047	2.07	9,312	1.99	7,712	2.01	7,503	2.42	7,880	2.18	7,392	2.06
PRICE AREA 5																				
District 16. Northern Colorado	2,707	.52	2,899	.51	2,881	.47	2,956	.58	3,158	.60	2,879	.61	2,727	.71	2,586	.82	2,158	.72	2,296	.64
District 17. Southern Colorado	9,111	1.75	9,457	1.65	9,133	1.77	8,615	1.72	8,179	1.53	6,350	1.36	4,845	1.22	3,677	1.18	3,813	1.07	3,998	.99
District 18. New Mexico	1,089	.20	1,065	.19	1,085	.21	1,099	.21	1,171	.21	977	.21	785	.21	657	.21	665	.18	968	.24
Total, Price Area 5	12,867	2.47	13,895	2.35	12,699	2.45	12,560	2.51	12,508	2.33	10,166	2.18	8,357	2.14	6,862	2.21	6,636	1.93	6,818	1.79
PRICE AREA 6																				
District 19. Wyoming	6,977	1.26	6,512	1.14	6,754	1.30	6,572	1.31	6,705	1.25	6,088	1.30	4,956	1.30	4,171	1.35	4,813	1.30	4,599	1.21
District 20. Utah	4,890	.90	4,578	.76	4,782	.91	4,863	.97	5,161	.96	4,257	.91	3,350	.88	2,892	.92	2,675	.80	2,548	.67
Total, Price Area 6	11,867	2.16	10,886	1.90	11,536	2.75	11,435	2.88	11,866	2.21	10,345	2.21	8,306	2.18	7,063	2.27	6,488	2.80	6,767	1.88
PRICE AREA 7																				
District 21. North Dakota and South Dakota	1,339	.26	1,385	.24	1,380	.25	1,664	.33	1,875	.35	1,713	.36	1,587	.41	1,789	.58	1,881	.55	1,839	.51
PRICE AREA 8																				
District 22. Montana	3,666	.59	2,798	.49	3,344	.60	3,398	.66	3,407	.64	3,022	.65	2,378	.62	2,125	.69	2,152	.65	2,600	.73
PRICE AREA 9																				
District 23. Washington	2,538	.49	2,587	.45	2,635	.51	2,529	.50	2,521	.47	2,332	.49	1,886	.48	1,628	.53	1,599	.48	1,587	.45
GRAND TOTAL - AREAS LISTED IN ACT	519,957	99.98	573,851	99.98	517,647	99.97	500,992	99.96	538,868	99.98	467,378	99.96	381,958	99.96	309,384	99.96	333,516	99.96	358,263	99.96
States not districted	13	—	19	—	32	.01	37	.01	20	—	88	.01	85	.01	23	.01	19	.01	18	.01
Alaska	83	.02	87	.02	104	.02	126	.03	101	.02	120	.03	106	.03	103	.03	96	.03	112	.03
UNITED STATES	520,053	100.00	573,957	100.00	517,783	100.00	500,755	100.00	538,989	100.00	467,526	100.00	382,049	100.00	309,710	100.00	333,631	100.00	358,393	100.00

1/ According to the Act, the Minimum Price Area 1 includes that part of Southeastern, district 13, comprising Van Buren, Warren, and Hoffman counties in Tennessee. Production, if any, for these counties has been tabulated in Price Area 2. Warren and Hoffman counties have not produced coal for many years, and the annual production in Van Buren in recent years has been less than 10,000 tons.

By E. L. Young and F. G. Tryon,
Statistics Section, Coal Economics Division,
Bureau of Mines.
September 27, 1935.

884


Coal Production, 1821 - 1924*
Chart Shows Ten Year Averages, from 1821 through 1860; Five Year
Averages from 1861 through 1915; Each Year's Production 1916-19
In Millions of Net Tons
Anthracite
Bituminous
Total
700
650
600
550
500
450
400
350
300
250
200
150
* Preliminary


Averages from 1861 through 1915 by Five Years; Production 1916-19
In Millions of Net Tons
Anthracite
Bituminous
Total
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
* Preliminary
Source: Compiled from Reports of Bureau of Mines
1821-1831
1831-1841
1841-1851
1851-1861
1861-1865
1866-1870
1871-1875
1876-1880
1881-1885
1886-1890
1891-1895
1896-1900
1901-1905
190
191

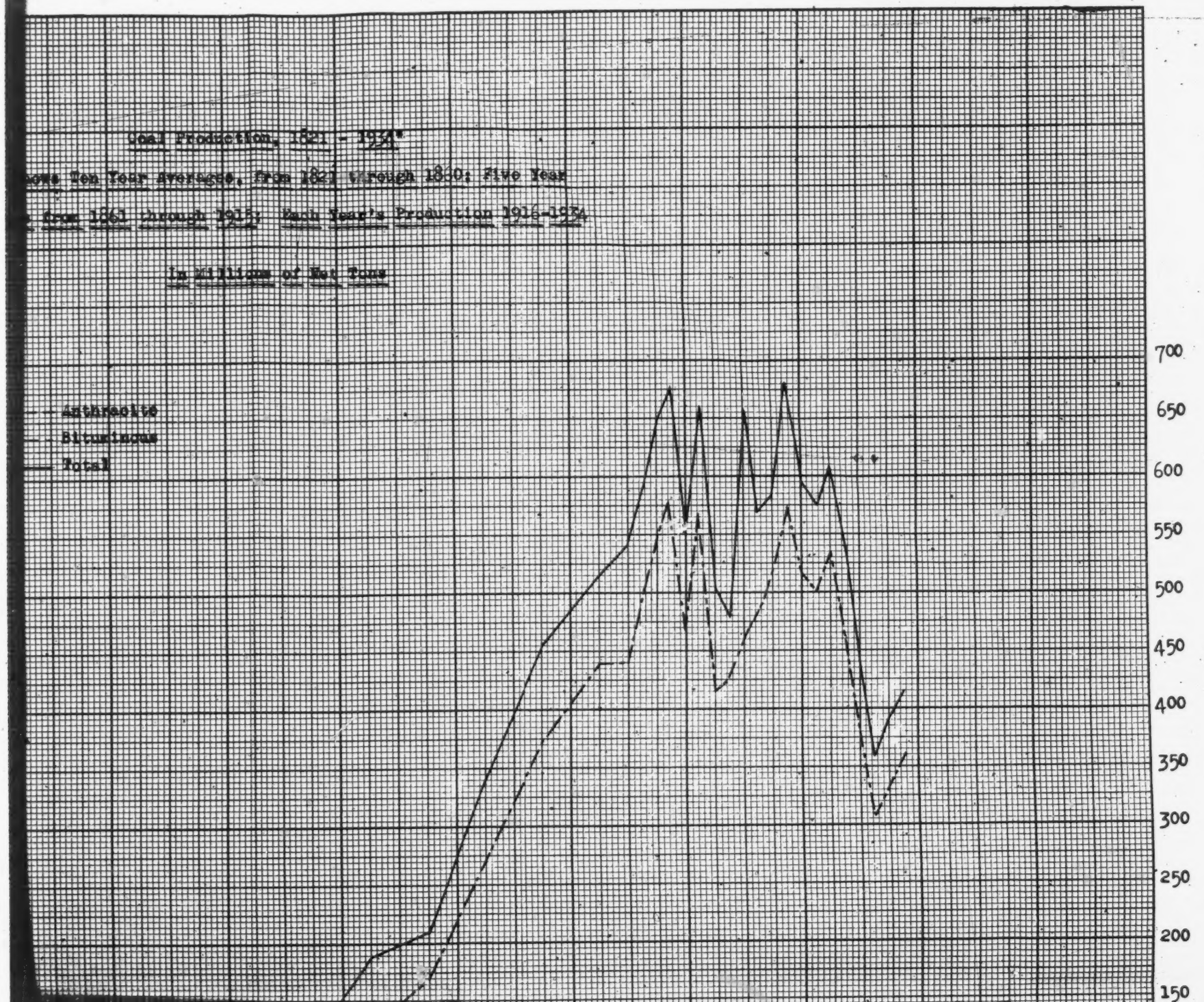
Plaintiff's Ex 20

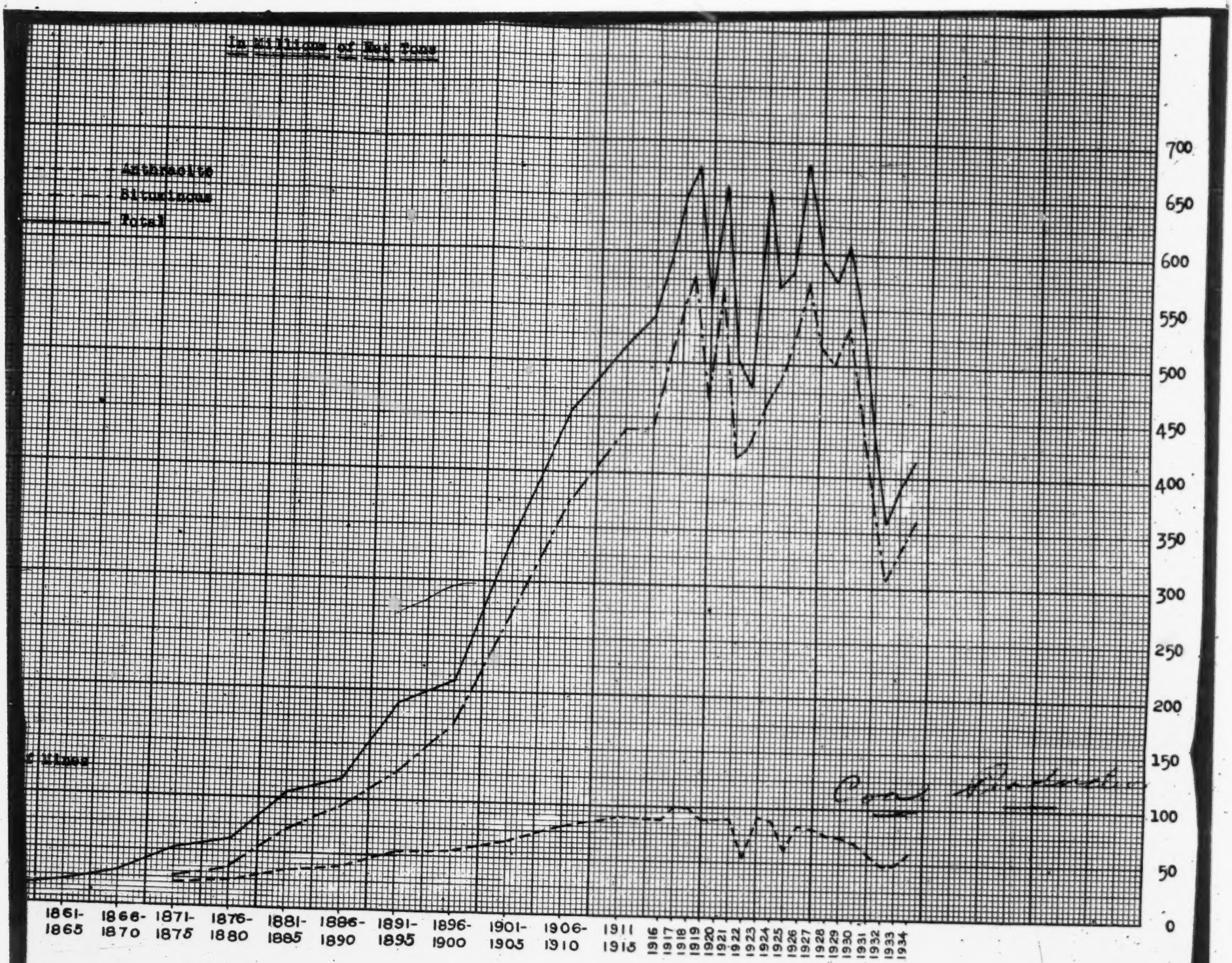
Coal Production, 1821 - 1934*

...ows Ten Year Averages, from 1821 through 1830; Five Year ...

... from 1861 through 1935; Each Year's Production 1916-1934

In Millions of Net Tons




In Millions of Net Tons
Anthracite
Bituminous
Total
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
1861-1865
1866-1870
1871-1875
1876-1880
1881-1885
1886-1890
1891-1895
1896-1900
1901-1905
1906-1910
1911-1915
1916
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934

[fol. 886]

PLAINTIFF'S EXHIBIT 21

Coal Production 1821—1934*

Note.—Figures for anthracite relate to Pennsylvania output only. Bituminous coal includes brown coal and small amounts of anthracite outside of Pennsylvania.

Year or Yearly Average	In Thousands of Net Tons		
	Total	Anthracite	Bituminous
1821–1830	140	66	75
1831–1840	1,032	722	310
1841–1850	4,535	2,697	1,837
1851–1860	12,513	7,645	4,868
1861–1865	20,538	11,142	9,396
1866–1870	31,706	16,281	15,425
1871–1875	52,179	23,407	28,773
1876–1880	62,261	25,800	36,461
1881–1885	107,291	36,198	71,093
1886–1890	138,398	43,952	94,446
1891–1895	178,822	53,405	125,416
1896–1900	227,123	55,625	171,498
1901–1905	339,357	66,854	272,503
1906–1910	454,555	81,142	373,413
1911–1915	529,189	89,233	439,955
1916	590,098	87,578	502,520
1917	651,402	99,612	551,791
1918	678,212	98,826	579,386
1919	553,952	88,092	465,860
1920	658,265	89,598	568,667
1921	506,395	90,473	415,922
1922	476,951	54,683	422,268
1923	657,904	93,339	564,565
1924	571,613	87,927	483,687
1925	581,870	61,817	520,053
1926	657,804	84,437	573,367
1927	597,859	80,096	517,763
1928	576,093	75,348	500,745
1929	608,817	73,828	534,989
1930	536,911	69,385	467,526
1931	441,735	59,646	382,089
1932	359,565	49,855	309,710
1933	383,172	49,541	333,631
1934*	415,780	57,385	358,395

* Preliminary, as of February 23, 1935 report of Bureau of Mines.

Source: Bureau of Mines.

Source: Page 680 of Statistical Abstract, 1934, except final 1933 and preliminary 1934.

(Here follows plaintiff's Exhibits 22 and 23, folios 887 and 888.)

ELECTRICITY PRODUCED, CONSUMPTION OF FUEL, AND CAPACITY OF GENERATORS IN PUBLIC-UTILITY POWER PLANTS

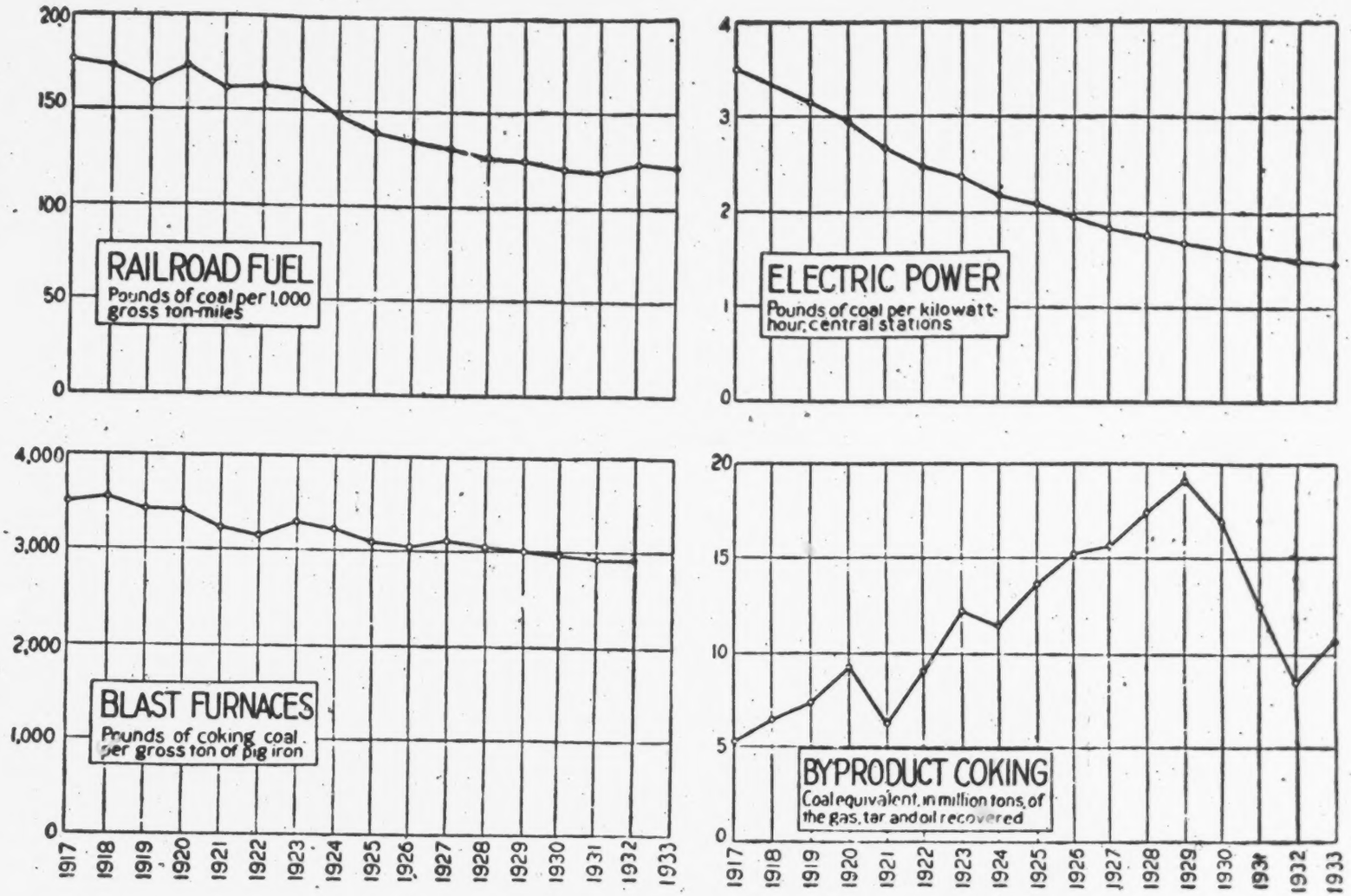
NOTE.—Data prior to 1919 are totals for central stations and electric railways as reported by Bureau of the Census; thereafter, they are estimated totals for all plants, based on returns from about 3,500 plants in 1919 to about 3,800 in 1933, each producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, steam railroads generating electricity for traction, and certain other plants. The capacity of plants reporting is about 95 percent of that of all plants

Calendar year	Production of electricity			Consumption of fuel			Consumption—Coal or coal equivalent	
	Total	Water power	Fuel power	Coal	Fuel oil	Gas	Total	Per kilowatt-hour
	Million kilowatt-hours	*Million kilowatt-hours*	*Million kilowatt-hours*	*Thousand tons* [1]	*Thousand barrels* [2]	*Million cubic feet*	*Thousand tons* [1]	*Pounds*
1902	4,798							
1912	17,572							
1917	32,679							
1919	38,921	14,606	24,315	35,100	11,050	21,406	38,880	3.2
1920	43,555	16,150	27,405	37,124	13,123	24,702	41,420	3.0
1921	40,975	14,970	26,005	31,585	12,045	23,722	35,240	2.7
1922	47,654	17,207	30,447	34,179	13,197	27,172	38,000	2.5
1923	55,665	19,343	36,322	38,966	14,684	31,433	43,522	2.4
1924	59,014	19,969	39,044	37,556	16,630	48,443	43,130	2.2
1925	65,870	22,356	43,514	40,222	10,246	46,521	44,780	2.1
1926	73,791	26,189	47,602	41,311	9,399	53,207	45,856	1.95
1927	80,205	29,875	50,330	41,888	6,782	62,919	45,910	1.84
1928	87,850	34,696	53,154	41,350	7,158	77,326	46,387	1.76
1929	97,352	34,629	62,723	44,937	10,124	112,707	52,574	1.69
1930	95,936	33,021	62,915	42,898	9,260	120,200	50,654	1.62
1931	91,729	30,603	61,126	38,734	8,123	139,328	47,134	1.55
1932	83,153	34,098	49,055	30,290	7,967	107,875	36,600	1.50
1933	85,402	34,727	50,674	30,575	9,940	102,601	37,163	1.47

[1] Of 2,000 pounds. [2] Of 42 gallons.

SOURCE: 1902 to 1917, Bureau of the Census; thereafter, Geological Survey, Department of the Interior.

Plaintiff's Ex 22



Trends in fuel efficiency in the United States, 1917-33.

SOURCE: Bureau of Mines. Above is photostat of charts appearing on page 574 of Minerals Yearbook, 1934.

Plaintiff's Ex 23

[fol. 889]

PLAINTIFF'S EXHIBIT 24

Indicators of the Effect of Fuel Economy on Consumption of Coal per Unit of Performance Since the World War

	Pounds	Reduction (percent)
Steam railroads:		
Pounds per 1,000 gross ton-miles freight service:		
Average, 1919–20	170	
Average, 1933	121	28.8
Pounds per passenger-train car-mile:		
Average, 1919–20	18.5	
Average, 1933	15.2	17.8
Electric public-utility power plants:		
Pounds per kilowatt-hour, 1919	3.2	
Pounds per kilowatt-hour, 1933	1.5	53.1
Iron and steel—pounds coking coal per ton of pig:[1]		
1918	3,577	
1933	2,876	19.6
Coke manufacture: Savings of heat values through recovery of gas, tar, light oils, and breeze by extension of byproduct in place of beehive coking, 1913-33, expressed as percent of coal used for all coke in 1933[2]		19.2

[1] Includes only savings through higher yields of merchantable coke per ton of coal charged and lower consumption of coke per ton of iron. Excludes economies through recovery of byproducts, which are treated in next item.

[2] These byproducts are used in part for boiler fuel, in part for metallurgical purposes, in part for domestic heating and cooking, and to a small extent for automotive fuel.

Source: Bureau of Mines.

Source: Page 311 of "Coal", Statistical Appendix to Minerals Yearbook, 1934.

(Here follow 3 photos, folios 890-892.)

Plaintiff's Exhibit No. 25

Modern Combustion, Coal Economics and Fuel Fallacies

A popular text-book or manual of the latest developments in fuels and their combustion.

By

CLARENCE V. BECK

Author of "What Price Heat?"; "The Piped Fuel Bugaboo"; "Comparative Fuel Values of Coal, Oil and Gas"; "Stokers and Their Possibilities."

Published by

MID-WEST COAL RETAILER

"The Modern Heating and Merchandising Magazine"

20 West Jackson Blvd.

Chicago, Ill.

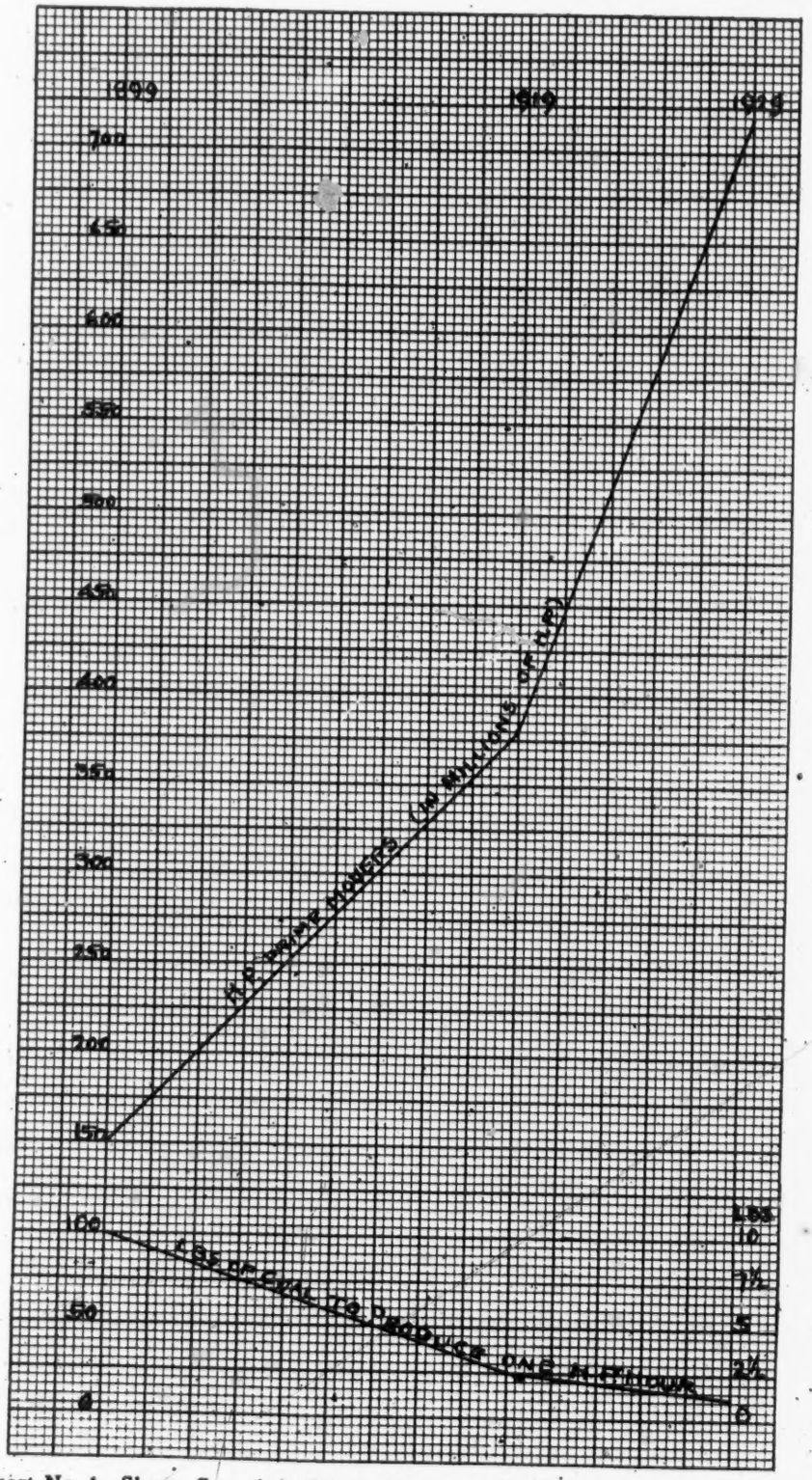
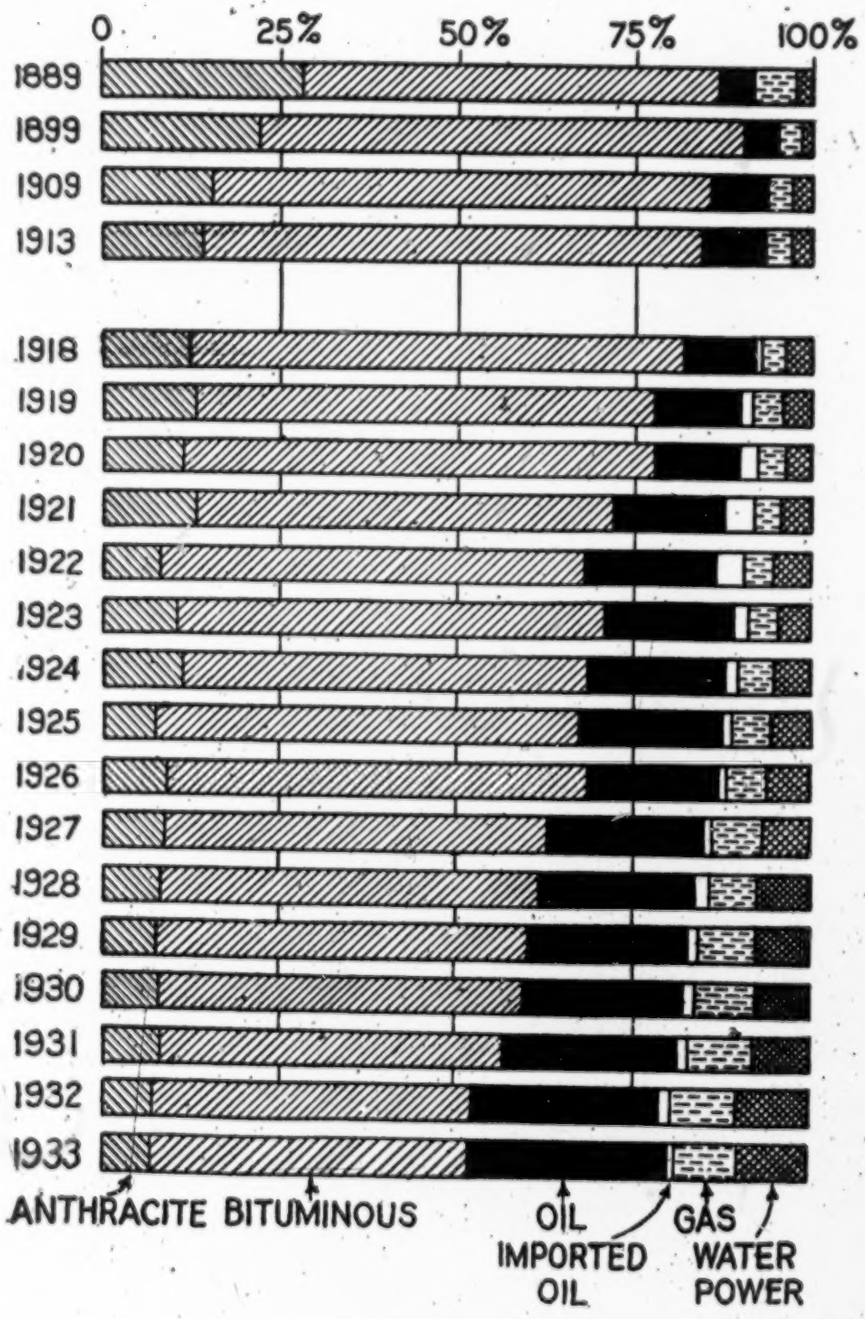


Chart No. 1—Shows Growth in Prime Movers and Decreasing Pounds of Coal Per h.p. Hour

8201B

Plaintiff's Ex 26

PERCENTAGE OF THE ENERGY SUPPLY OF THE UNITED STATES DERIVED FROM COAL, OIL, GAS, AND WATER POWER, 1889-1933



SOURCE: Bureau of Mines

Source: Page 285 of "Coal", Statistical Appendix to Minerals Yearbook, 1934.

8200

PLAINTIFF'S EXHIBIT 27

Relative Rate of Growth of Coal and Other Sources of Power

Annual Supply of Energy from Mineral Fuels and Water Power in the United States, 1909–1933

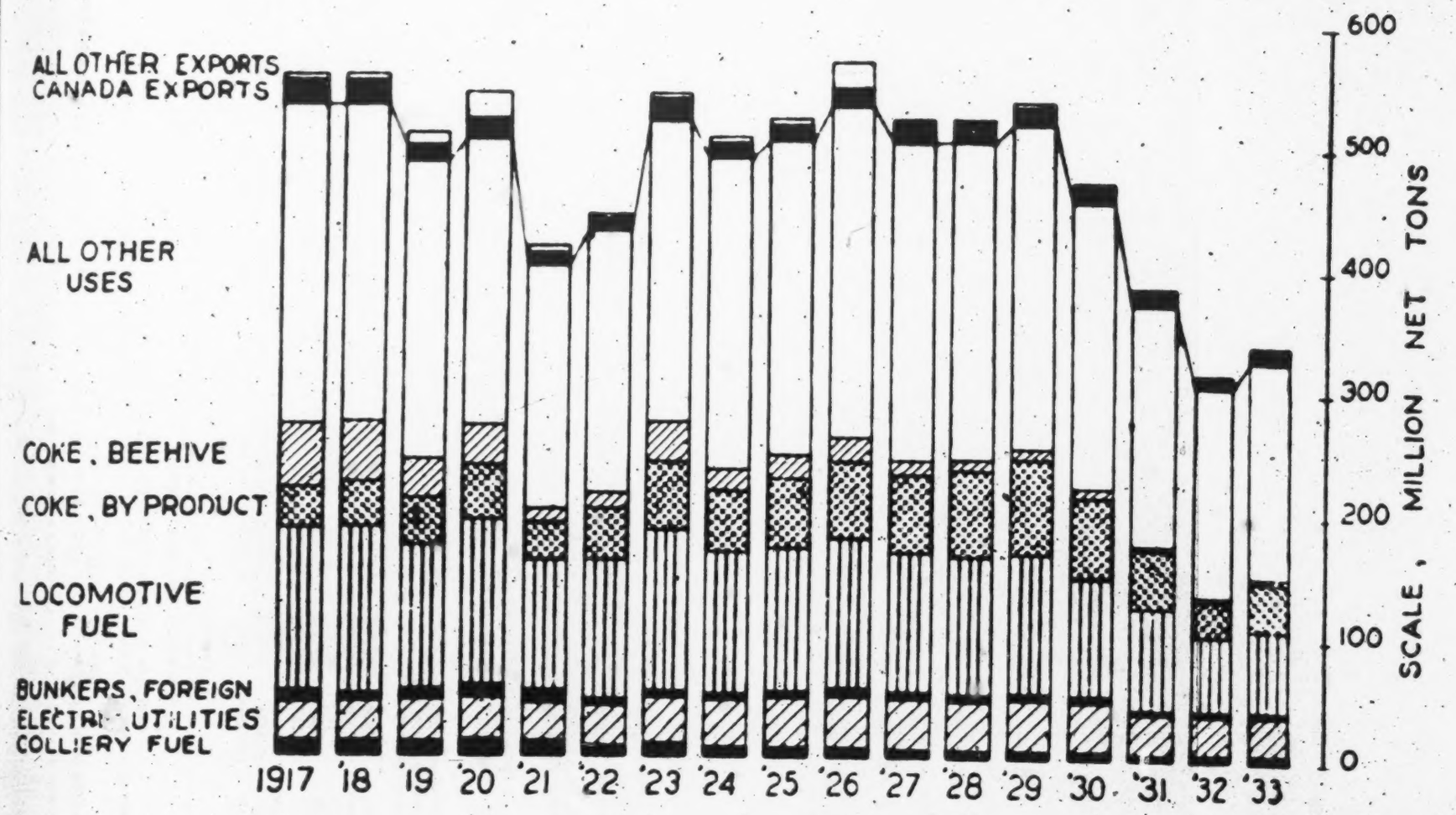
(Figures represent trillions of British thermal units and because of rounding do not always add across exactly. In calculating thermal equivalents the gross British thermal unit values are used. Water power is represented by British thermal units of coal necessary to produce the same amount of power. Figures represent production except those for oil imports and take no account of changes of stock.)

Year	Anthracite	Bituminous coal	Total coal	Domestic oil (total crude, including that refined)	Natural gas (total production)	Imported oil (total crude, including that refined)	Total oil and gas	Total mineral fuels	Water power	Grand total including water power
1909	2,205	9,949	12,155	1,099	517	*	1,616	13,771	411	14,182
1913	2,490	12,535	15,025	1,491	626	102	2,219	17,243	588	17,831
1918	2,688	15,180	17,868	2,136	775	226	3,137	21,005	837	21,842
1919	2,396	12,206	14,602	2,270	802	317	3,389	17,991	892	18,883
1920	2,437	14,899	17,336	2,658	858	637	4,153	21,489	971	22,460
1921	2,461	10,897	13,358	2,833	712	752	4,297	17,655	908	18,563
1922	1,487	11,063	12,551	3,345	820	764	4,929	17,480	1,024	18,504
1923	2,539	14,791	17,330	4,394	1,082	492	5,968	23,298	1,136	24,434
1924	2,392	12,672	15,064	4,284	1,227	467	5,978	21,042	1,167	22,209
1925	1,681	13,625	15,306	4,582	1,278	371	6,231	21,537	1,290	22,827
1926	2,297	15,022	17,319	4,625	1,411	362	6,398	23,717	1,492	25,209
1927	2,179	13,565	15,744	5,407	1,553	350	7,310	23,054	1,687	24,741
1928	2,049	13,120	15,169	5,409	1,686	479	7,574	22,743	1,942	24,685
1929	2,008	14,017	16,025	6,044	2,062	474	8,580	24,605	1,929	26,534
1930	1,887	12,249	14,136	5,388	2,089	373	7,850	21,986	1,856	23,842
1931	1,622	10,011	11,633	5,106	1,813	284	7,203	18,836	1,721	20,557
1932	1,356	8,114	9,470	4,711	1,673	268	6,652	16,122	1,900	18,022
1933	1,348	8,741	10,089	5,434	1,672	191	7,297	17,386	1,931	19,317

* Imports negligible before 1913.

Source: Bureau of Mines.
Source: Page 623, Table 7 of "Coal in 1930" for data up to 1930, page 284. Table 2 of "Coal", Statistical Appendix to Minerals Yearbook, 1934.

(Here follows Plaintiff's Exhibit 28, folio 894.)



Source: Photostat of figure 27 on page 560 of Minerals Yearbook, 1934.

Plaintiff's Ex 28

Tonnage of bituminous coal absorbed by the principal branches of consumption, 1917–33.

SOURCE: Bureau of Mines

[fol. 895] PLAINTIFF'S EXHIBIT 29

Changes in the United States Consumption of Bituminous Coal by Such Classes of Consumers as Report Currently, and by all other consumers 1929–1933, in Thousands of Net Tons

(Information on several other classes of consumers is available for certain years. The items shown in this table are selected because they are available in strictly comparable form for each year.)

	Consumed in the United States								Exported		
Year	Colliery fuel	Electric public utilities [1]	Bunkers foreign trade [2]	Locomotive fuel class I roads [3]	Coke beehive ovens [4]	Coke by-product ovens [4]	All other uses [5]	Total consumption [6]	To Canada and Mexico [4]	To All other countries [3]	Total of consumption and exports [7]
1929	4,663	44,937	4,287	113,894	10,028	76,759	264,987	519,555	14,727	2,702	536,984
1930	3,993	42,898	3,497	98,400	4,284	65,521	236,397	454,990	13,667	2,210	470,867
1931	3,205	38,735	2,195	81,725	1,767	46,846	197,396	371,869	10,647	1,479	383,995
1932	2,781	30,290	1,350	66,498	1,030	30,887	174,081	306,917	8,429	385	315,731
1933	2,858	30,575	1,316	66,198	1,408	38,681	180,712	321,748	8,600	437	330,785

[1] U. S. Geological Survey. Includes a small amount of anthracite.
[2] Bureau of Foreign and Domestic Commerce.
[3] Interstate Commerce Commission. Note that consumption in shops, roundhouses, and stations is excluded, also the entire consumption of class II and III roads.
[4] U. S. Bureau of Mines.
[5] Obtained by subtracting the known items from the total consumption. Includes general manufacturing, domestic, and many miscellaneous uses. From other sources it is known that consumption in steel works and general manufacturing is decreasing and that consumption for domestic uses is increasing.
[6] Production plus imports minus exports, plus or minus changes in consumers' stocks.
[7] Note that consumption includes the small amount imported.

Source: Bureau of Mines. (Statistical Appendix to Minerals Yearbook, 1934).
Source: Table 25, page 311, of chapter on "Coal" in Statistical Appendix to Minerals Yearbook, 1934.

(Here follows 1 poster, folio 896 and 1 map, folio 897.)

Plaintiff's Ex

ANNUAL SUPPLY OF ENERGY FROM MINERAL FUELS AND WATER POWER IN THE UNITED STATES

NOTE.--The figures, except coal equivalent, represent the equivalent of the heating power of the classes of fuel in trillions of British thermal units. Data represent production, except those for oil imports, and take no account of exports, imports, or changes in stocks

Annual average or year	Anthracite	Bituminous	Total coal	Domestic oil	Natural gas	Imported oil	Water power[1]	Grand total fuels and water power	Equivalent in bituminous coal[2]	
									Million tons of 2,000 lbs.	Per capita, tons
1871-1875	637	754	1,391	49	-	-	(1)	1,520	58	1.4
1876-1880	718	955	1,673	101	-	-	(1)	1,857	71	1.5
1881-1885	985	1,863	2,848	153	3 24	-	(1)	3,110	119	2.2
1886-1890	1,195	2,474	3,669	198	3 264	-	(1)	4,221	161	2.7
1891-1895	1,453	3,286	4,739	307	3 166	-	104	5,316	203	3.0
1896-1900	1,513	4,493	6,006	357	3 198	-	129	6,690	255	3.5
1901-1905	1,818	7,140	8,958	612	323	-	209	10,102	386	4.8
1906-1910	2,207	9,783	11,990	1,037	470	1	369	13,867	529	5.9
1911-1915	2,427	11,527	13,954	1,486	619	72	591	16,722	638	6.6
1916-1920	2,523	13,981	16,504	2,176	820	297	851	20,648	788	7.6
1921-1925	2,112	12,610	14,722	3,888	1,024	569	1,105	21,308	813	7.3
1926-1930	2,084	13,595	15,679	5,375	1,760	408	1,781	25,002	954	8.0
1928	2,049	13,120	15,169	5,409	1,686	479	1,942	24,685	942	7.9
1929	2,008	14,017	16,025	6,044	2,062	474	1,929	26,534	1,013	8.3
1930	1,887	12,249	14,136	5,388	2,089	373	1,856	23,842	910	7.4
1931	1,622	10,011	11,633	5,106	1,813	284	1,721	20,557	785	6.4
1932	1,356	8,114	9,470	4,711	1,673	268	1,900	18,022	688	5.4
1933 [4]	1,344	8,592	9,936	5,393	1,591	203	1,931	19,054	727	5.5

Annual average or year	Anthracite	Bituminous	Total coal	Domestic oil	Natural gas	Imported oil	Water power[1]	Fuels and water power	Million tons of 2,000 lbs.	Per capita, tons
1871-1875	637	754	1,391	49	-	-	(1)	1,520	58	1.4
1876-1880	718	955	1,673	101	-	-	(1)	1,857	71	1.5
1881-1885	985	1,863	2,848	153	[3] 24	-	(1)	3,110	119	2.2
1886-1890	1,195	2,474	3,669	198	[3] 264	-	(1)	4,221	161	2.7
1891-1895	1,453	3,286	4,739	307	[3] 166	-	104	5,316	203	3.0
1896-1900	1,513	4,493	6,006	357	[3] 198	-	129	6,690	255	3.5
1901-1905	1,818	7,140	8,958	612	323	-	209	10,102	386	4.8
1906-1910	2,207	9,783	11,990	1,037	470	1	369	13,867	529	5.9
1911-1915	2,427	11,527	13,954	1,486	619	72	591	16,722	638	6.6
1916-1920	2,523	13,981	16,504	2,176	820	297	851	20,648	788	7.6
1921-1925	2,112	12,610	14,722	3,888	1,024	569	1,105	21,308	813	7.3
1926-1930	2,084	13,595	15,679	5,375	1,760	408	1,781	25,002	954	8.0
1928	2,049	13,120	15,169	5,409	1,686	479	1,942	24,685	942	7.9
1929	2,008	14,017	16,025	6,044	2,062	474	1,929	26,534	1,013	8.3
1930	1,887	12,249	14,136	5,388	2,089	373	1,856	23,842	910	7.4
1931	1,622	10,011	11,633	5,106	1,813	284	1,721	20,557	785	6.3
1932	1,356	8,114	9,470	4,711	1,673	268	1,900	18,022	688	5.5
1933 [4]	1,344	8,592	9,936	5,393	1,591	203	1,931	19,054	727	5.8

[1] The fuel equivalent for water power is calculated from the reported horsepower of installed water wheels. Prior to 1890 data were unsatisfactory but estimates are included in the total.

[2] Calculated at 26,200,000 British thermal units per ton.

[3] Based on the amount of coal displaced by gas, as estimated by the gas companies at the time.

[4] Preliminary.

Source: Bureau of Mines.

Plaintiff's Ex. 30

ANNUAL SUPPLY OF ENERGY FROM MINERAL FUELS AND WATER POWER IN THE UNITED STATES

NOTE.--The figures, except coal equivalent, represent the equivalent of the heating power of the classes of fuel in trillions of British thermal units. Data represent production, except those for oil imports, and take no account of exports, imports, or changes in stocks

Anthracite	Bituminous	Total coal	Domestic oil	Natural gas	Imported oil	Water power[1]	Grand total fuels and water power	Equivalent in bituminous coal[2]	
								Million tons of 2,000 lbs.	Per capita, tons
637	754	1,391	49	-	-	(1)	1,520	58	1.4
718	955	1,673	101	-	-	(1)	1,857	71	1.5
985	1,863	2,848	153	3 24	-	(1)	3,110	119	2.2
1,195	2,474	3,669	198	3 264	-	(1)	4,221	161	2.7
1,453	3,286	4,739	307	3 166	-	104	5,316	203	3.0
1,513	4,493	6,006	357	3 198	-	129	6,690	255	3.5
1,818	7,140	8,958	612	323	-	209	10,102	386	4.8
2,207	9,783	11,990	1,037	470	1	369	13,867	529	5.9
2,427	11,527	13,954	1,486	619	72	591	16,722	638	6.6
2,523	13,981	16,504	2,176	820	297	851	20,648	788	7.6
2,112	12,610	14,722	3,888	1,024	569	1,105	21,308	813	7.3
2,084	13,595	15,679	5,375	1,760	408	1,781	25,002	954	8.0
2,049	13,120	15,169	5,409	1,686	479	1,942	24,685	942	7.9
2,008	14,017	16,025	6,044	2,062	474	1,929	26,534	1,013	8.3
1,887	12,249	14,136	5,388	2,089	373	1,856	23,842	910	7.4
1,622	10,011	11,633	5,106	1,813	284	1,721	20,557	785	6.3
1,356	8,114	9,470	4,711	1,673	268	1,900	18,022	688	5.5
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	727	5.8

Anthracite	Bituminous	Total coal	Domestic oil	Natural gas	Imported oil	Water power[1]	Grand total fuels and water power	Equivalent in bituminous coal[2]	
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2,523	13,981	16,504	2,176	820	297	851	20,648	788	7.6
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2,049	13,120	15,169	5,409	1,686	479	1,942	24,685	942	7.9
2,008	14,017	16,025	6,044	2,062	474	1,929	26,534	1,013	8.3
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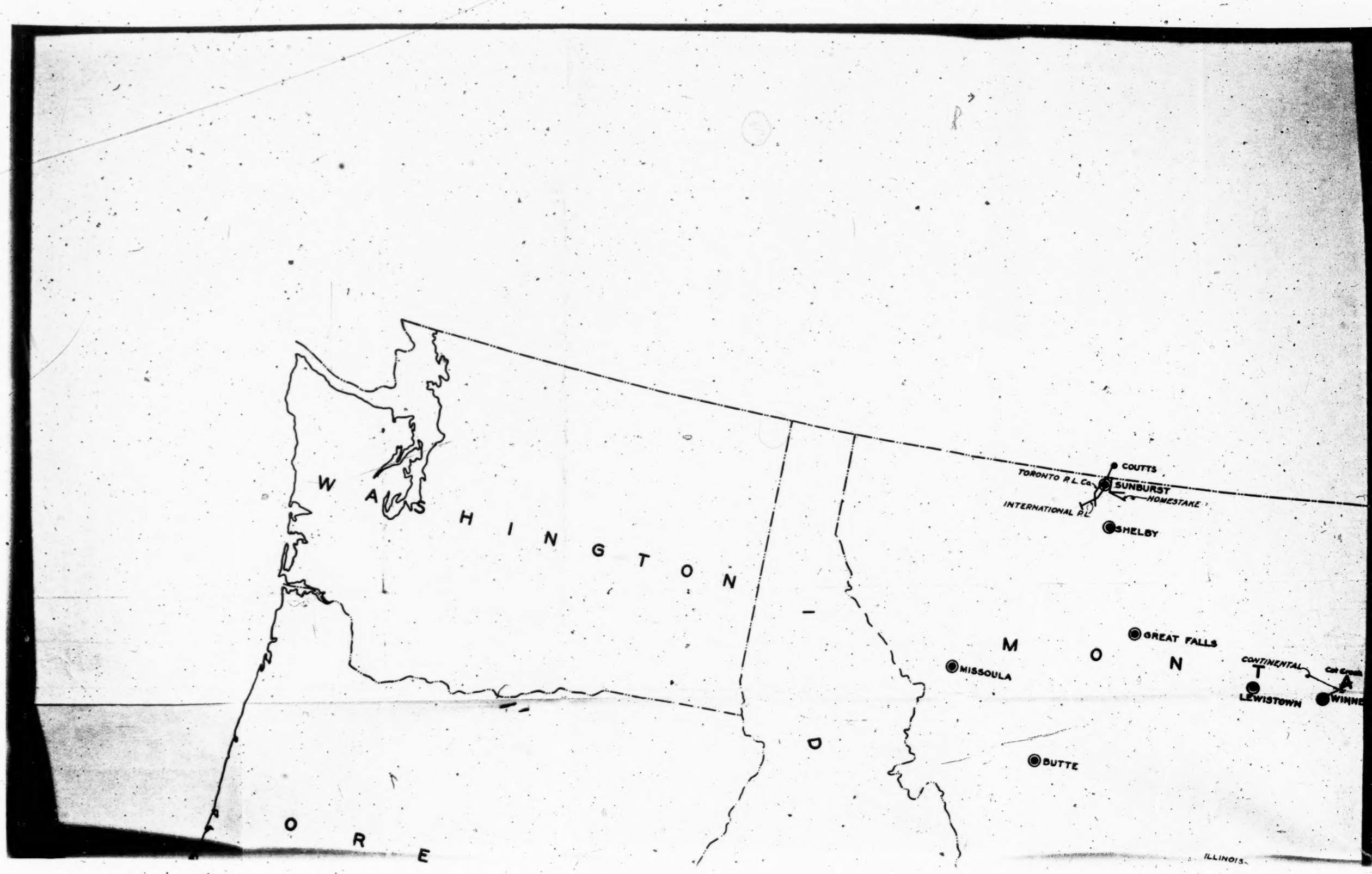
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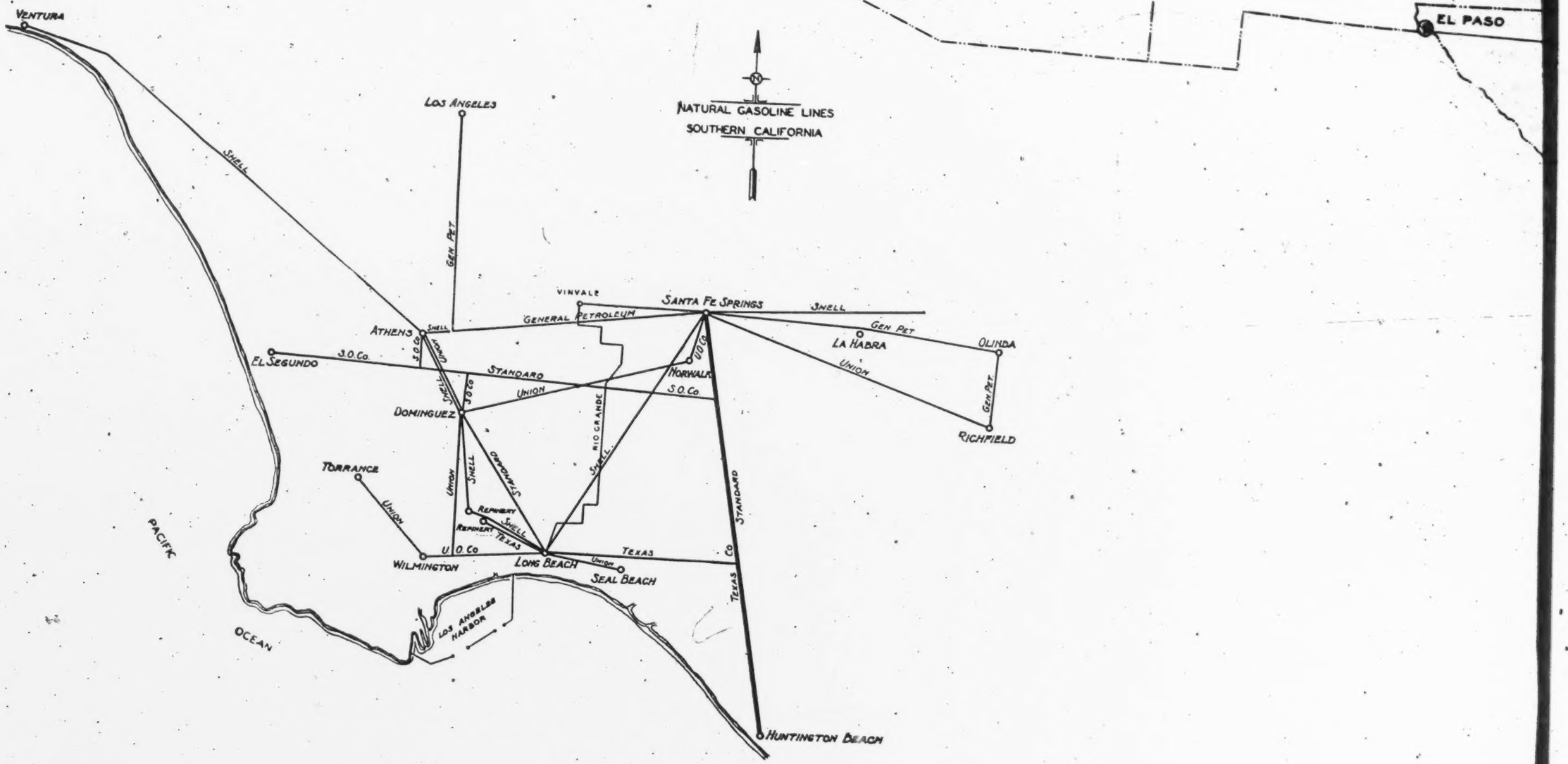

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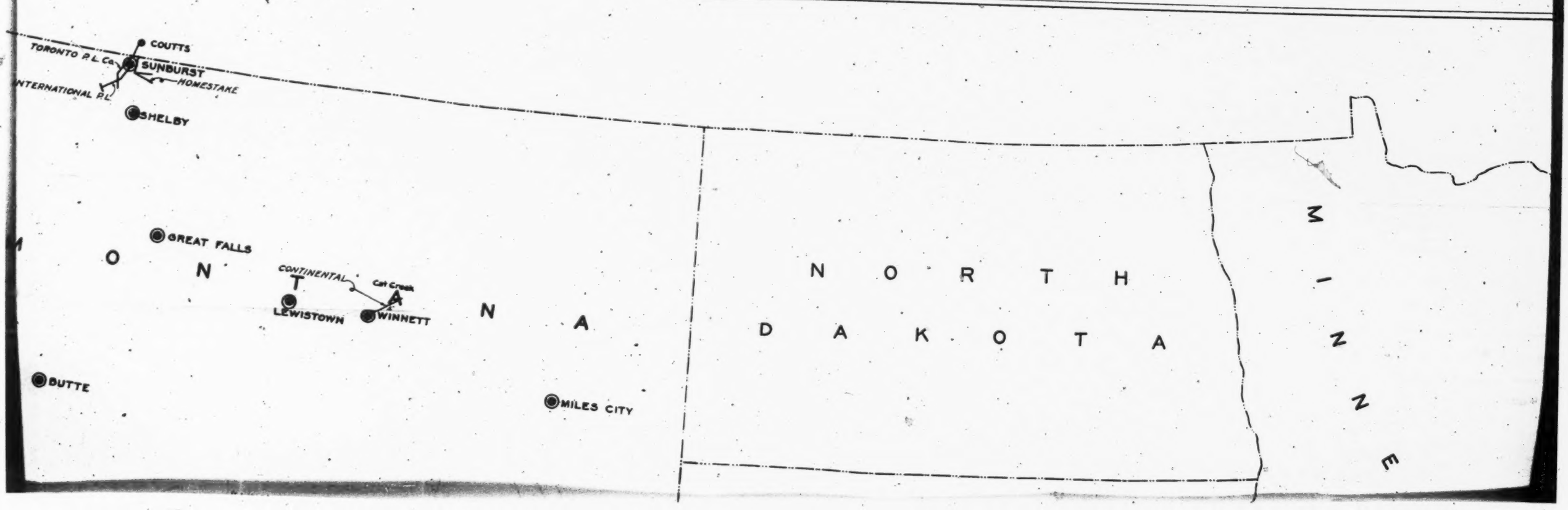

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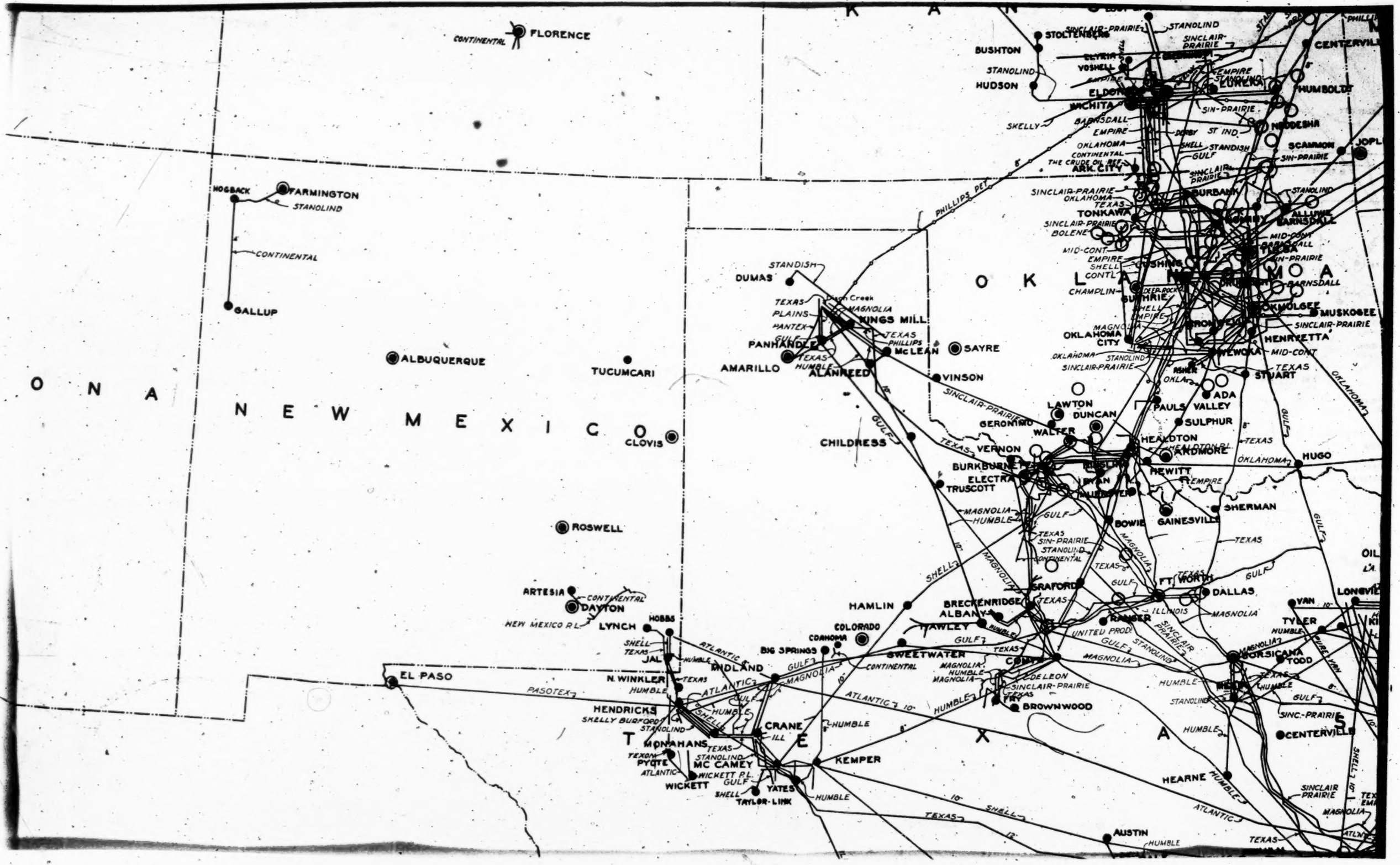
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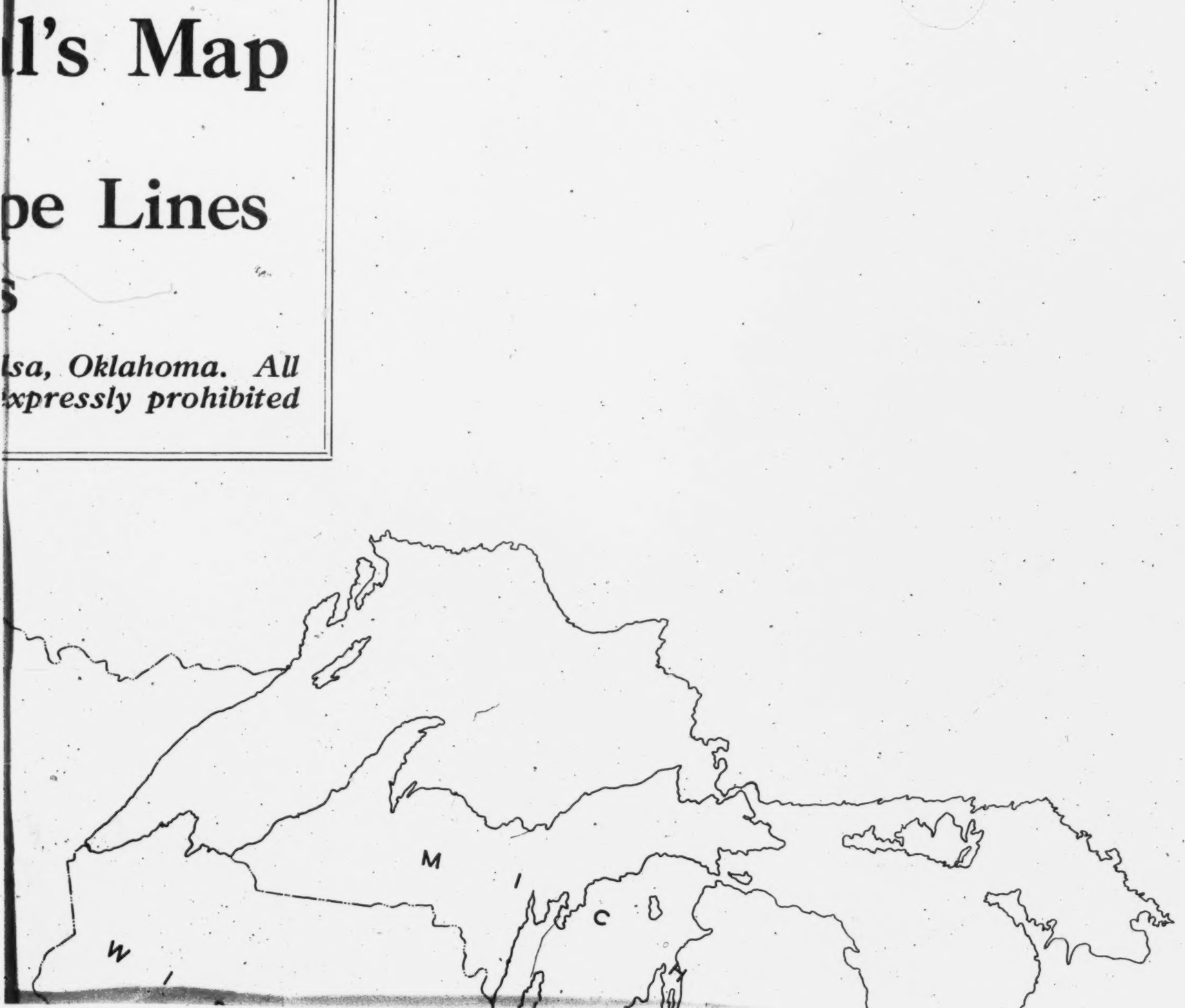

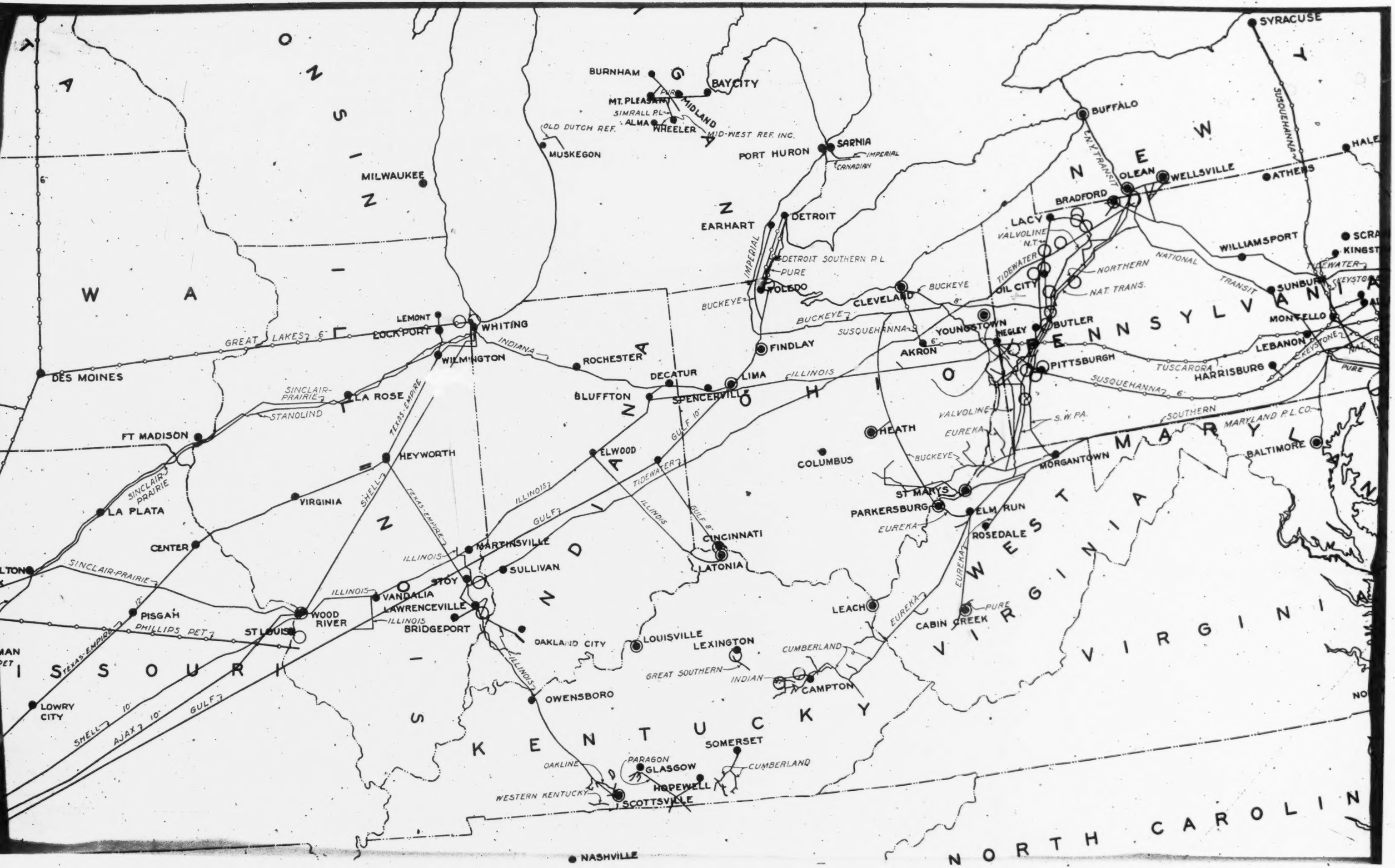
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TEXAS
BAYTOWN
TEXAS CITY
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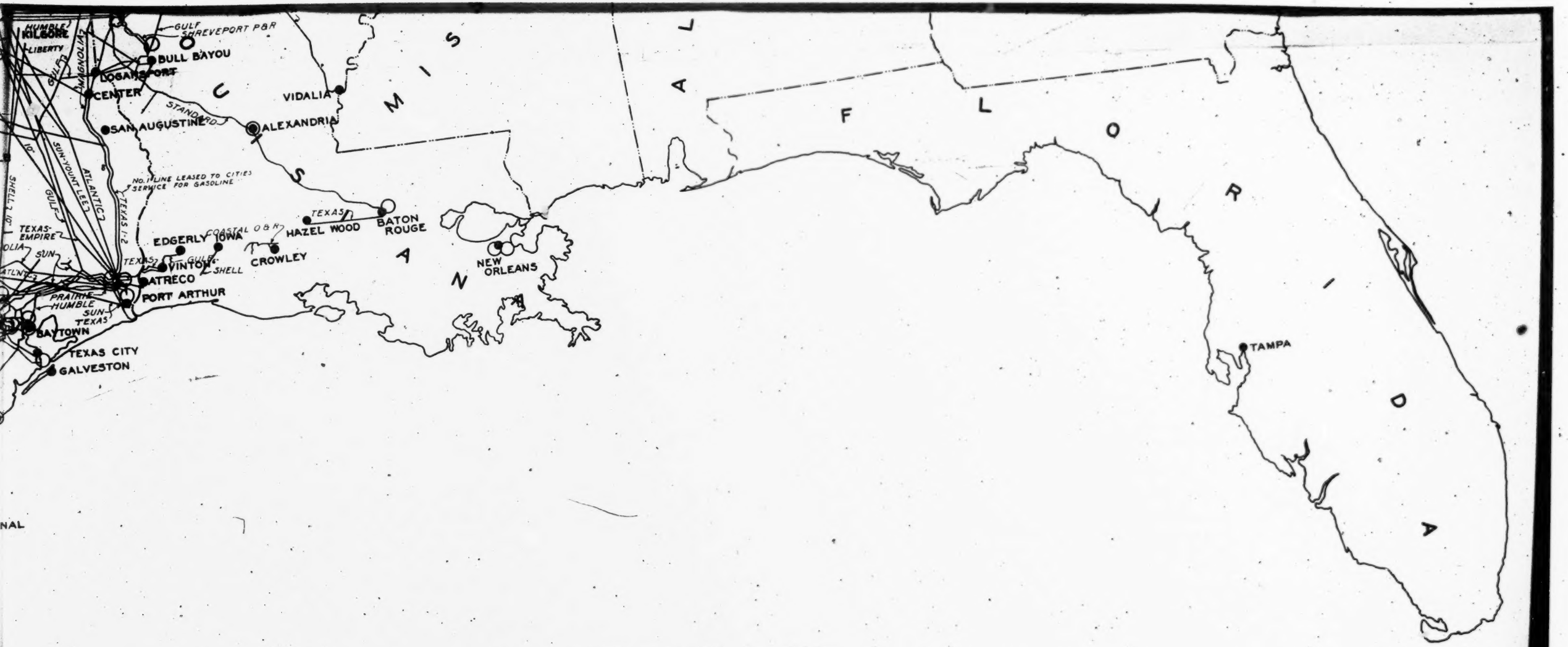
NEW ORLEANS
TAMPA



GASOLINE LINE

MAINE
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VERMONT
YORK
SYRACUSE
EVERETT

BURNHAM
BAY CITY
MT. PLEASANT
SIMRALL PL.
MIDLAND
ALMA
WHEELER
MID-WEST REF. INC.
OLD DUTCH REF.
MUSKEGON
SARNIA
IMPERIAL
CANADIAN
PORT HURON
EARHART
DETROIT
IMPERIAL
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BUCKEYE
CLEVELAND
BUCKEYE
BUCKEYE
FINDLAY
SUSQUEHANNA
YOUNGSTOWN
AKRON
WHEELING
BUTLER
PITTSBURGH
TUSCARORA
HARRISBURG
SUSQUEHANNA
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LIMA
DECATUR
ROCHESTER
INDIANA
WHITING
LEMONT
ROCKPORT
WILMINGTON
TEXAS-EMPIRE
ROSE
HEYWORTH
BLUFFTON
SPENCERVILLE
GULF 10"
ELWOOD
TIDEWATER
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SULLIVAN
STOY
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CINCINNATI
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WELLSVILLE
BRADFORD
LACY
VALVOLINE
N.T.
TIDEWATER
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NATIONAL
TRANSIT
HALES EDDY
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WILLIAMSPORT
SCRANTON
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ALLENTOWN
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LEBANON
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MIDDLESEX
MARCUS HOOK
PURE
BAYONNE
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WORCESTER
SPRINGFIELD
SOCONY-VACUUM
FALL RIVER
PROVIDENCE
CONNECTICUT
HEATH
VALVOLINE
EUREKA
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BUCKEYE
MORGANTOWN
SOUTHERN
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BALTIMORE
ST MARYS
PARKERSBURG
ELM RUN
ROSEDALE
EUREKA
EUREKA
LEACH
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CABIN CREEK
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INDIANA
OHIO
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NEW YORK
WEST VIRGINIA
VIRGINIA
MARYLAND
DELAWARE
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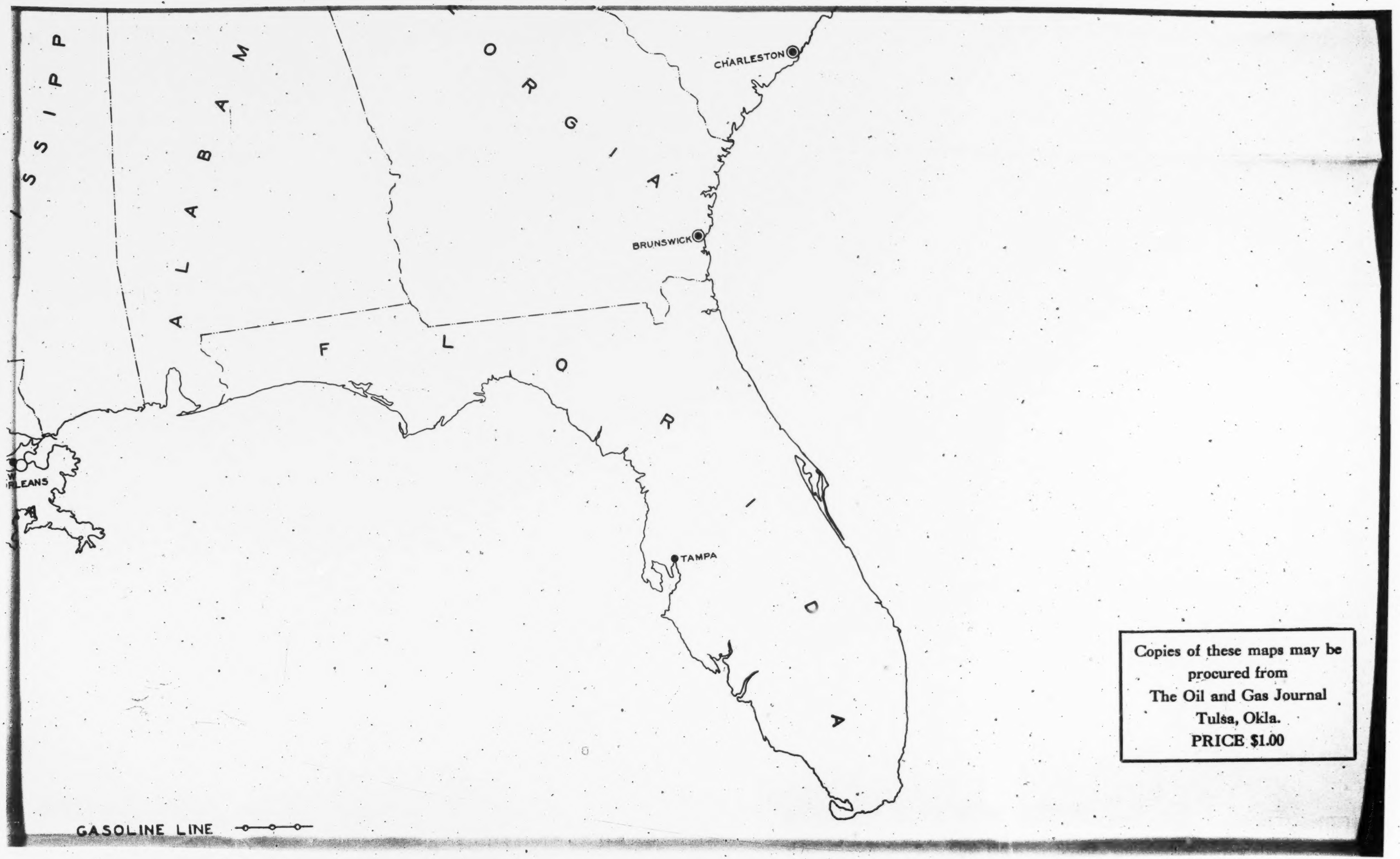
ALABAMA
FLO



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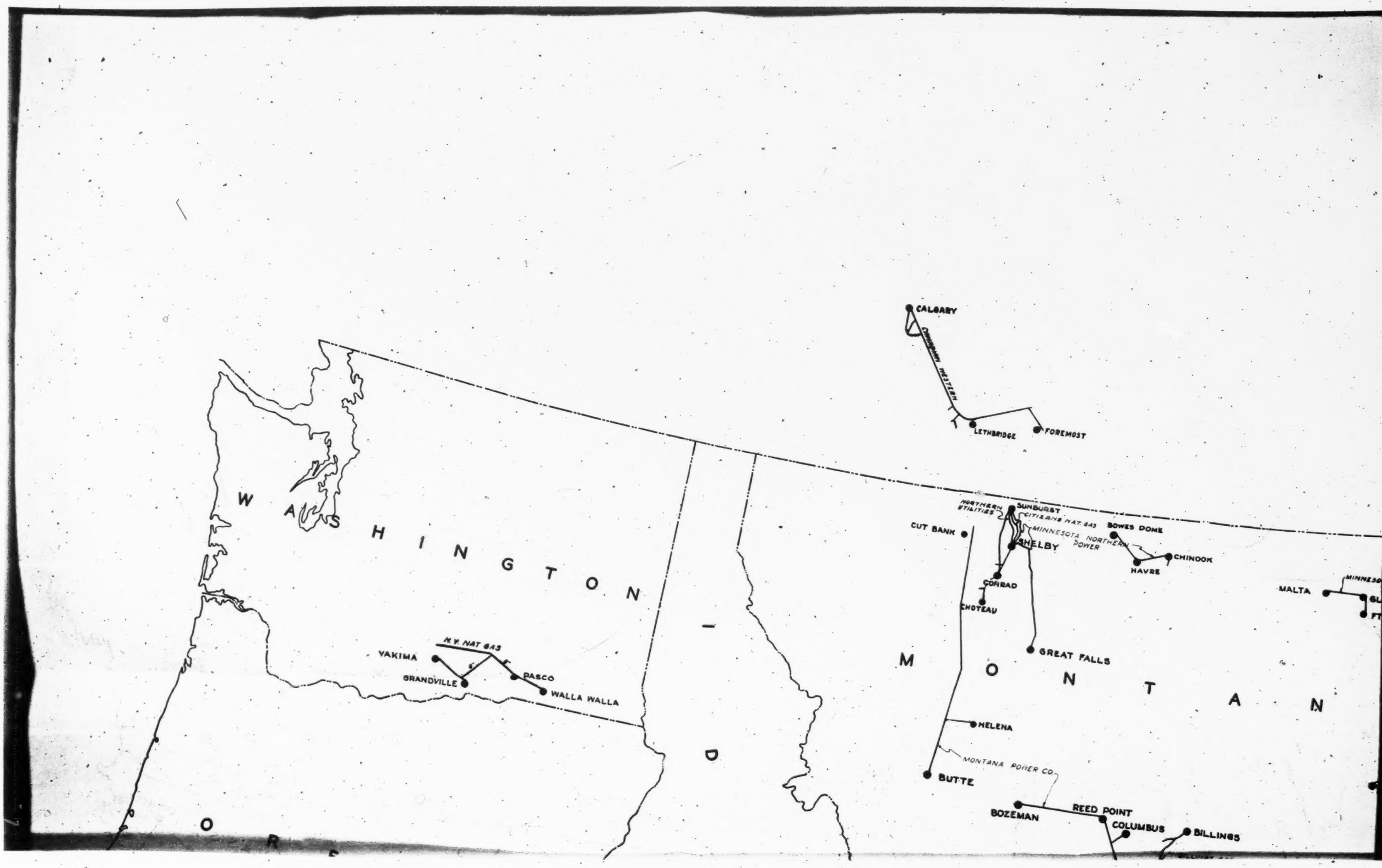
W A S H I N G T O N
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LETHBRIDGE
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NORTHERN UTILITIES
SUNBURST
CITIZENS NAT. GAS
MINNESOTA NORTHERN POWER
BOWES DOME
CHINOOK
HAVRE
CUT BANK
SHELBY
CONRAD
CHOTEAU
MALTA
GREAT FALLS
M O N T A N A
HELENA
MONTANA POWER CO.
BUTTE
BOZEMAN
REED POINT
COLUMBUS
BILLINGS
N.Y. NAT GAS
YAKIMA
GRANDVILLE
PASCO
WALLA WALLA

OREGON

IDAHO

NEVADA

UTAH

COLO

BOZEMAN

COLUMBUS

BILLINGS

BILLINGS GAS CO.

ELK BASIN

ROCKY MT. GAS

LOVELL

CODY GAS CO.

POWELL

BYRON

SHERIDAN

M. P. CO.

ROCKY MT. GAS

CODY

GREYBULL

BUFFALO

OREGON BASIN

BASIN

LITTLE BUFFALO BASIN

BIG HORN GAS

STANOLIND

LITTLE GRASS CREEK

THERMOPOLIS GAS CO.

THERMOPOLIS

BOISE

WYOMING

FORT WASHAKIE

RIVERTON

BOONE DOME

TEAPOT

NEW YORK OIL CO.

LANDER

SAND DRAW

CASPER

SINCLAIR-PRAIRIE STANOLIND

MAHONEY DOME

FERRIS

ROCKY MT. GAS

SINCLAIR PRAIRIE

ALLEN LAKE

RAWLINS

PARCO

SINCLAIR-PRAIRIE

PRESTON

OGDEN

EVANSTON

UTAH GAS

ROCK SRINGS

BAXTER BASIN

UTAH GAS

UTAH GAS

SALT LAKE CITY

MIAWATHA DOME

PLEASANT GROVE

CRAIG

CHICO

PACIFIC G.&E.

MARYSVILLE

SACRAMENTO

PAC G.&E.

MARTINEZ

OAKLAND

SAN FRANCISCO

STOCKTON

TRACY

VERNALIS

MERCED

STANDARD PAC.

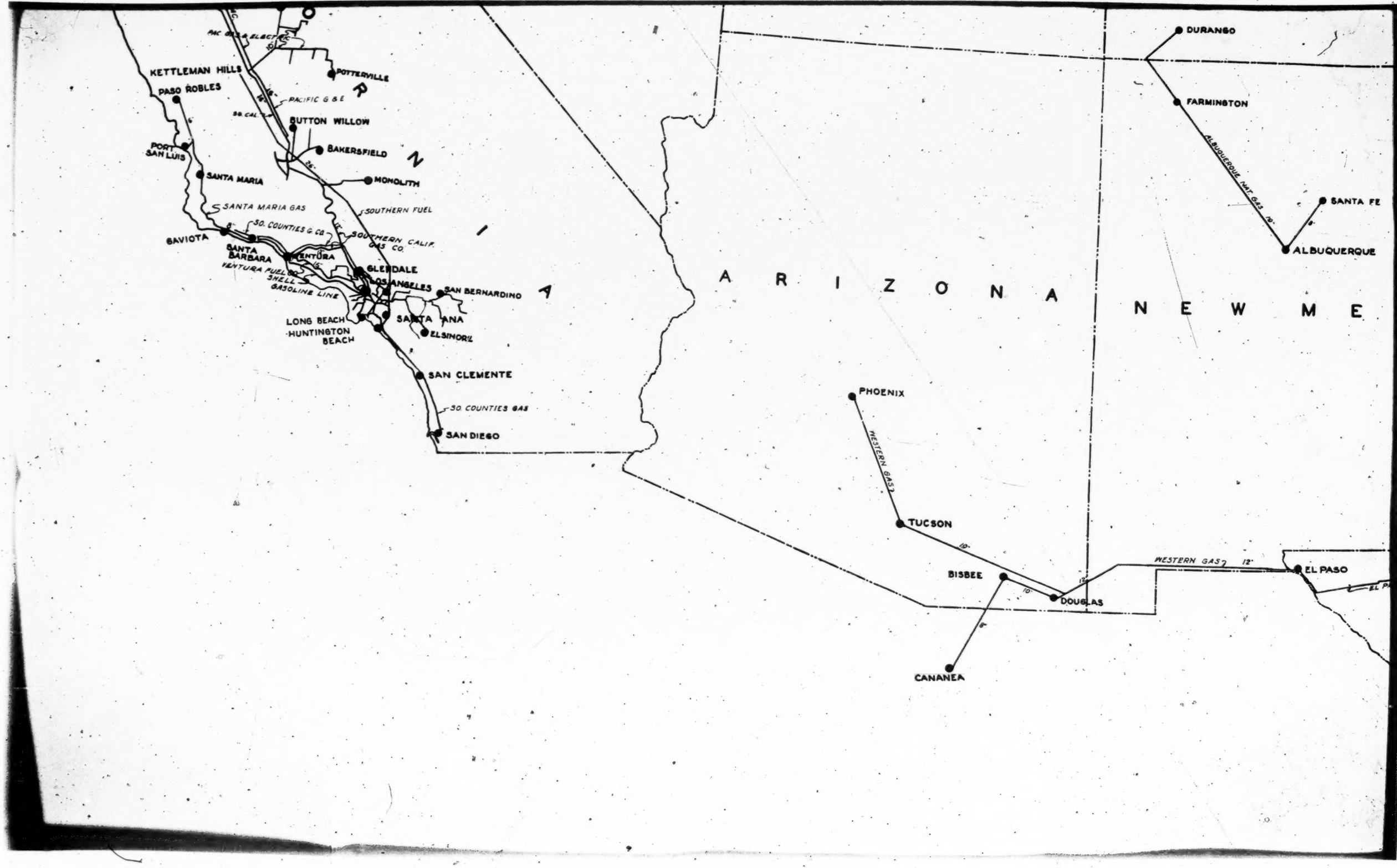
SAN JOAQUIN L&P

MONTEREY

FRESNO

PAC G.&E.

PUEBLO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PASO ROBLES
PORT SAN LUIS
SANTA MARIA
SANTA MARIA GAS
SO. COUNTIES G. CO.
GAVIOTA
SANTA BARBARA
VENTURA
VENTURA FUEL CO.
SHELL GASOLINE LINE
POTTERVILLE
PACIFIC G & E
SO. CAL. G.
BUTTON WILLOW
BAKERSFIELD
MONOLITH
SOUTHERN FUEL
SOUTHERN CALIF. GAS CO.
GLENDALE
LOS ANGELES
SAN BERNARDINO
SANTA ANA
ELSINORE
LONG BEACH
HUNTINGTON BEACH
SAN CLEMENTE
SO. COUNTIES GAS
SAN DIEGO
PHOENIX
WESTERN GAS
TUCSON
BISBEE
DOUGLAS
CANANEA
WESTERN GAS
EL PASO
DURANGO
FARMINGTON
ALBUQUERQUE NAT. GAS CO.
SANTA FE
ALBUQUERQUE
A R I Z O N A
N E W M E

The Oil and Gas Journal's Map

of

Natural Gas Trunk Pipe Lines in the United States

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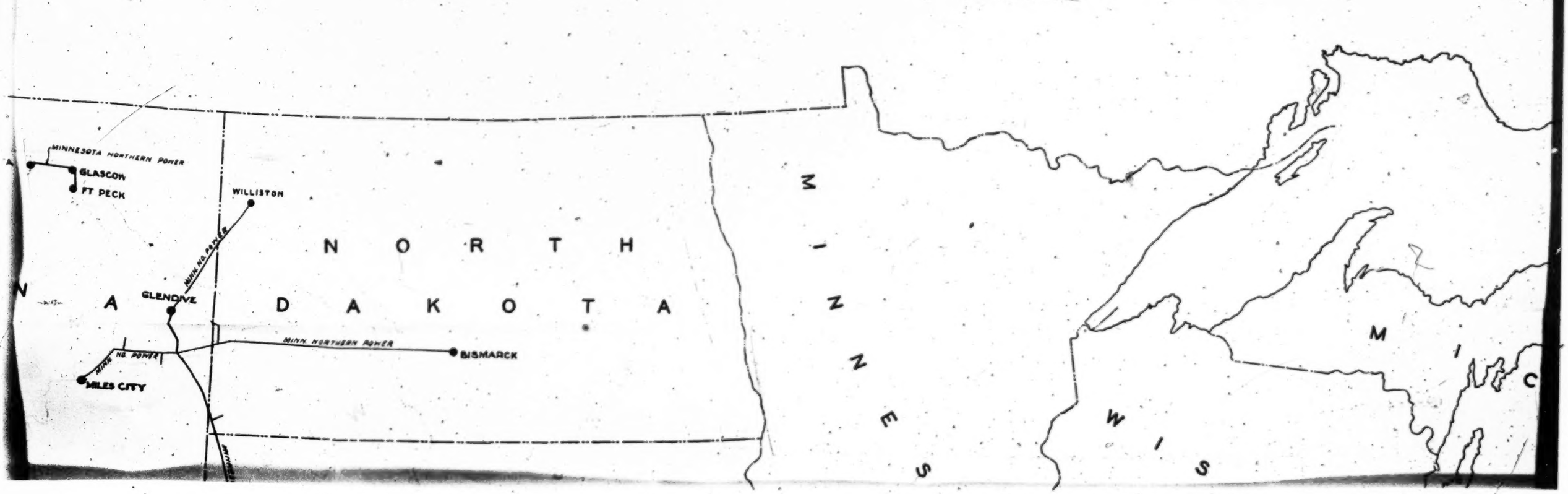

SOUTH DAKOTA

NEBRASKA

KANSAS

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MISSOURI

IOWA

WISCONSIN

MINNESOTA NORTHERN POWER

RAPID CITY

SIOUX FALLS

SIOUX CITY

WAYNE

MINNEAPOLIS

ST PAUL

NEW PRAGUE

ST PETER

ROCHESTER

WELLS

AUSTIN

MASON CITY

BRITT

NATURAL GAS CO.

MANSON

LAKE CITY

OGDEN

CEDAR RAPIDS

DAVENPORT

CHICAGO

JOLIET

CHICAGO PIPE LINE

TEAPOT

NEW YORK

CASPER

CHEYENNE

WHEATLAND

NORTH CENTRAL GAS CO.

ROCKY MTN. GAS

LARAMIE

LEWELLEN

KANSAS GAS CO.

COLUMBUS

GRAND ISLAND

KEARNEY

HOLDERIDGE

HASTINGS

LINCOLN

NEBRASKA CITY

COUNCIL BLUFFS

OMAHA

NORTHERN NATURAL GAS PIPE LINE CO. OF AMERICA

DES MOINES

FT MADISON

PEORIA

CANTON

CLINTON

URBANA

DANVILLE

QUINCY

SPRINGFIELD

CENT. ILL. PUB. SERV.

EFFINGHAM

EMPIRE

FT. COLLINS

GREELY

BOULDER

BRIGHTON

GOLDEN

DENVER

COLORADO SPRINGS

PUEBLO

PORTLAND

LA JUNTA

LAMAR

COLORADO INTERSTATE GAS CO.

COLORADO PUB. UTIL.

GARDEN CITY

NORTHERN NAT. GAS CO.

DODGE CITY

SUPERIOR

SMITH CENTER

FORMOSA

OSBORNE

LUBAY

RUSSELL

ELLSWORTH

LACROSSE

WESTERN GAS CO.

LYONS

McPHERSON

GREAT BEND

LARNED

HUTCHINSON

NEWTON

NATURAL GAS PIPE LINE CO. OF AMERICA

KANSAS GAS CO.

NEB. GAS CO.

FALL CITY

ST. JOSEPH

ATCHISON

MANHATTAN

ST MARY

TOPEKA

KANSAS CITY

OTTAWA

BURLINGTON

FREEMAN

PAOLA

UNION PUB. SERV.

OSAWATOMIE

OKLAHOMA NAT. GAS CO.

FT. SCOTT

NEVADA

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OKLA. NAT. GAS CO.

QUINN P.L. CO.

CHANUTE

GIRARD

PITTSBURG

CARTHAGE

SPRINGFIELD

MONETT

WICHITA

CONSOLIDATED GAS CO.

PANHANDLE EASTERN

HOWARD

WINFIELD

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FUEL CO.

CARROLLTON

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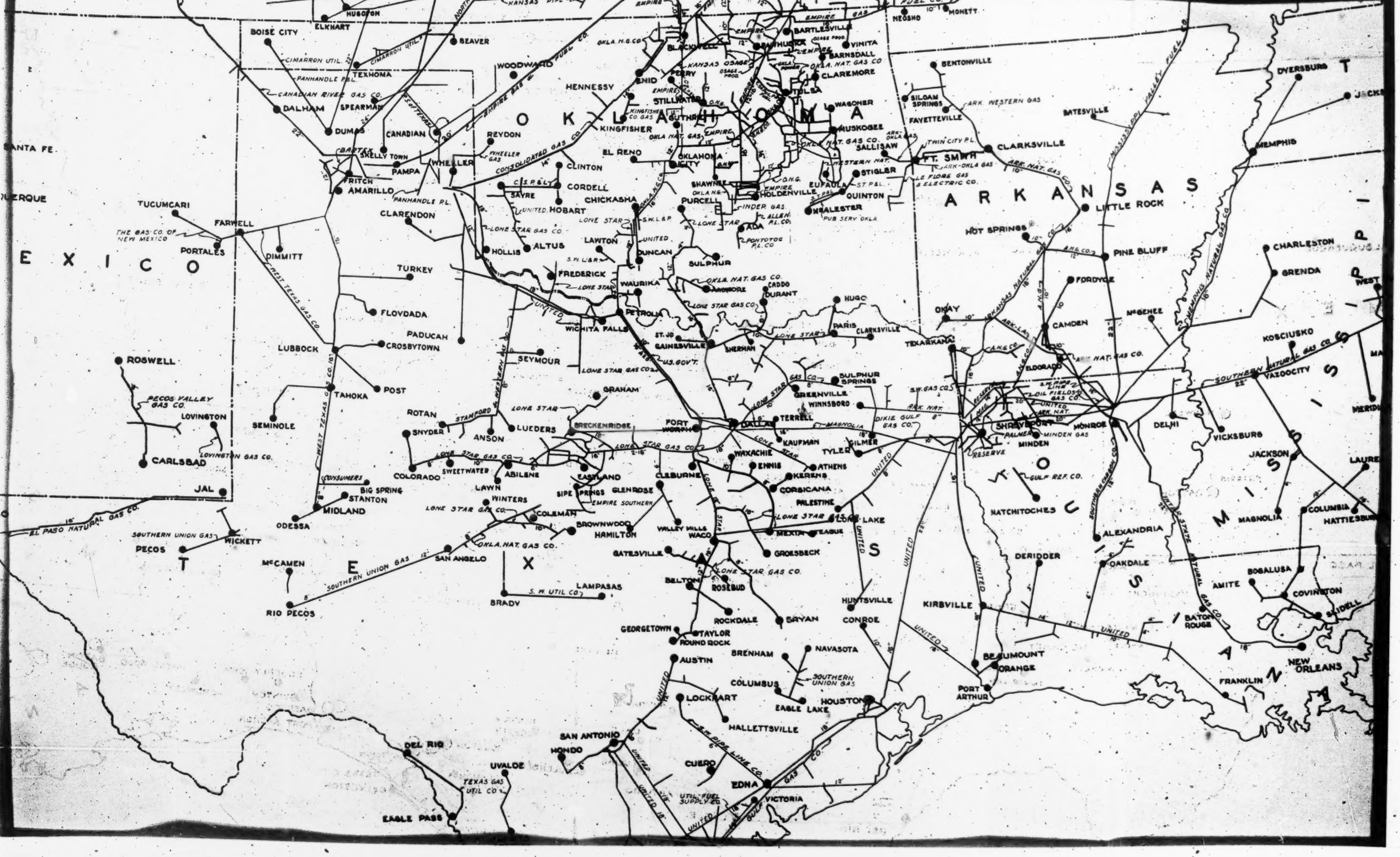
IND. & W. GAS CO.

EVANSVILLE

MURPHYSBORO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REYDON
WOODWARD
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ENID
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PURCELL
SHAWNEE
HOLDENVILLE
STILLWATER
GUTHRIE
PERRY
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VINITA
BARNSDALL
CLAREMORE
TULSA
WAGONER
MUSKOGEE
SALLISAW
STIGLER
EUFAULA
QUINTON
MCALESTER
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ALTUS
LAWTON
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SULPHUR
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GAINESVILLE
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McGEHEE
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PINE BLUFF
LITTLE ROCK
BENTONVILLE
SILOAM SPRINGS
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CANADIAN RIVER GAS CO.
CIMARRON UTIL.
NORTHERN NAT. GAS CO.
SOUTHWESTERN GAS & ELEC. CO.
C.S.P.&L.Y.
S.W.L.&P.
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PONTOTOC P.L. CO.
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OIL FIELDS GAS CO.
UNITED ARK. NAT.
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SOUTHERN UNION GAS
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LOVINGTON GAS CO.
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TEXAS GAS UTIL. CO.
UTIL. FUEL SUPPLY CO.
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GAS CO.
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WICKETT
McCAMEN
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MIDLAND
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BROWNSVILLE
MONTERREY
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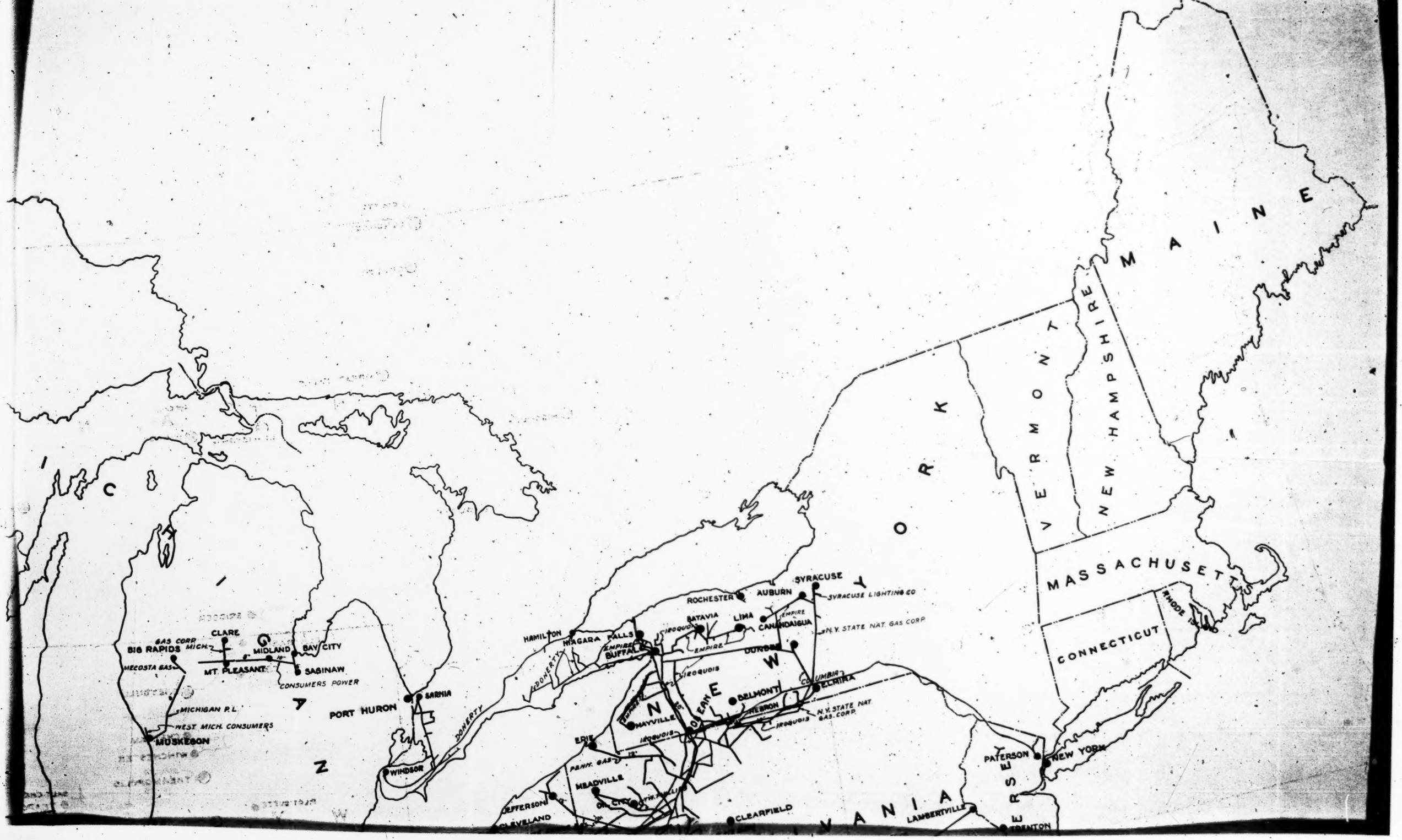
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LAKE ONTARIO
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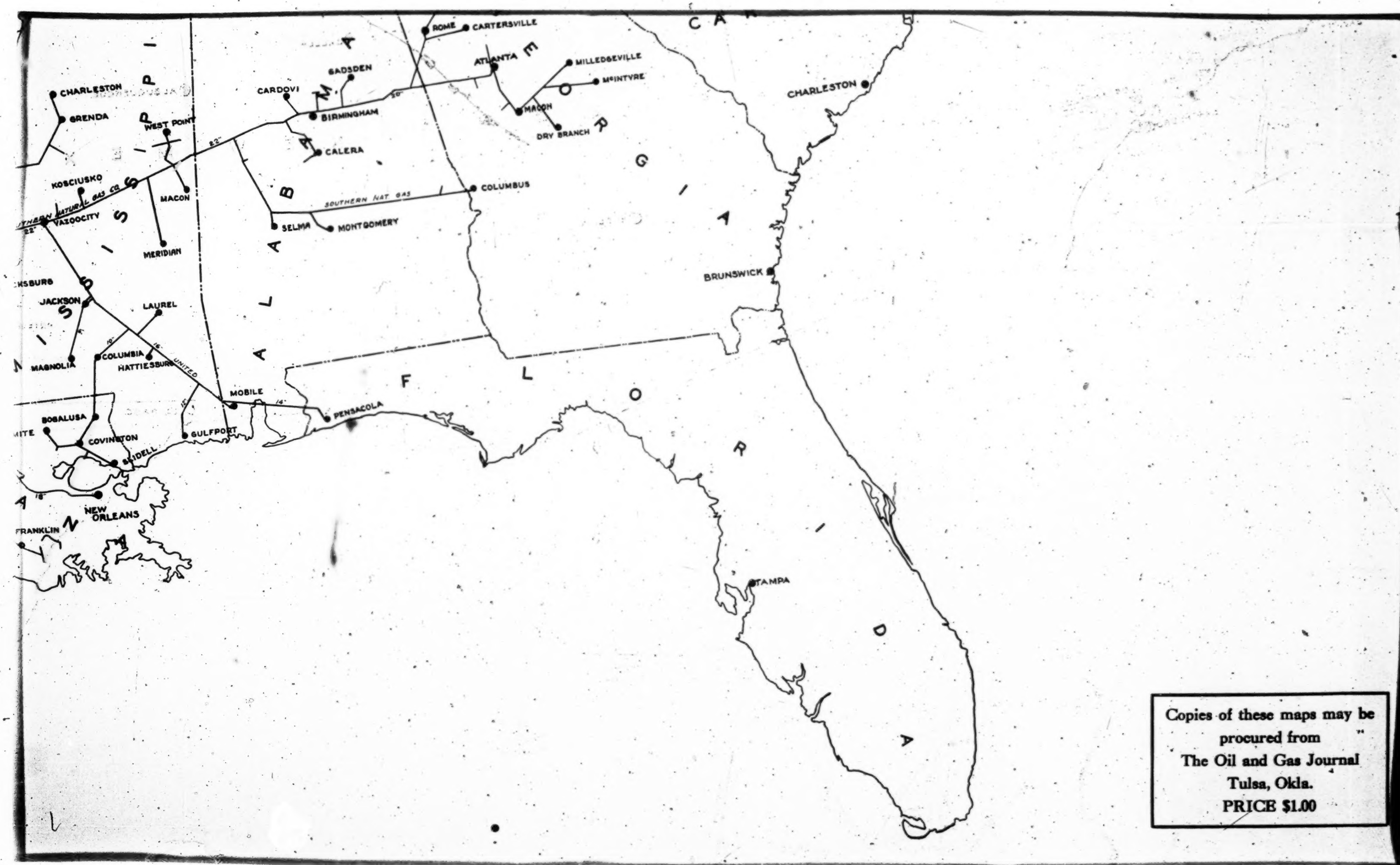
BIG RAPIDS
GAS CORP
MECOSTA GAS
MIDLAND
BAY CITY
MT. PLEASANT
SAGINAW
CONSUMERS POWER
MICHIGAN P.L.
WEST MICH. CONSUMERS
MUSKEGON
PORT HURON
SARNIA
WINDSOR
DOHERTY
HAMILTON
NIAGARA FALLS
BUFFALO
EMPIRE
IROQUOIS
ROCHESTER
BATAVIA
LIMA
AUBURN
SYRACUSE
SYRACUSE LIGHTING CO
CANANDAIGUA
N.Y. STATE NAT. GAS CORP.
DUNKIRK
COLUMBIA
ELMIRA
BELMONT
CHEMUNG
HAYVILLE
ERIE
PENN. GAS
MEADVILLE
JEFFERSON
CLEVELAND
CLEARFIELD
N.Y. STATE NAT. GAS CORP.
LAMBERTVILLE
TRENTON
PATERSON
NEW YORK

CHICAGO
JOLIET
CHICAGO DISTRICT PIPE LINE CO.
PEORIA
CANTON
CLINTON
URBANA
DANVILLE
SPRINGFIELD
EFFINGHAM
NEWTON
ALTON
ST LOUIS
MURPHYSBORO
EVANSVILLE
IND. 3 V GAS CO.
MARION
RED KEY
G.P.S.CO.
C.I.C.C.
TIPTON
MUNCIE
ANDERSON
NOBLESVILLE
IND. GAS TRANS. CO.
INDIANAPOLIS
BRIGHTCASTLE
CENT. ILL. PUB. SERV.
UNIVERSAL GAS
TERRE HAUTE
MARTINSVILLE
FRANKLIN
BLOOMINGTON
PUB. SERV. CO. OF IND.
SEYMOUR
PAOLI
VINCENNES
KENTUCKY
TROY
CLOVERPORT
MADISONVILLE
NAT. GAS
MUNFORDVILLE
RUSSELLVILLE
UNITED CARBON
CAMPBELLSVILLE
GREENSBURG
EQUITABLE
MAYTOWN
PIKEVILLE
LOUISVILLE
LOUISVILLE G.&E.
FRANKFORT
CYNTHIANA
COLUMBIA
CENT. KENTUCKY NAT. GAS
LEXINGTON
COLUMBIA GAS & ELECTRIC
KENTUCKY RIVER GAS CO.
CINCINNATI
DAYTON
SPRINGFIELD
OHIO FUEL & SUP.
CHILLICOTHE
PORTSMOUTH
OHIO VALLEY GAS CO.
CONNECTING GAS CO.
OHIO FUEL & SUP. CO.
COLUMBIA
EAST OHIO GAS CO.
NORWALK
FINDLAY
MANSFIELD
CANTON
MT VERNON
WHEELING
MANUFACTURERS LIGHT & HEAT
OHIO FUEL & SUP. CO. KUPHAM GAS
MANUFACTURERS GAS CO.
PARKERSBURG
MAN. L&H
HOPE NAT.
NAT. GAS OF W. VA.
CHARLESTON
NAT. GAS OF W. VA.
PITTSBURGH
CARNEGIE NAT. GAS
THE PHILADELPHIA CO.
PEOPLES
UNIONTOWN
FAYETTE CO. GAS
HOPE NAT. GAS
PHILA. CO.
CARNEGIE
LORETTO
TYRONE
ALTOONA
HARRISBURG
HARRISBURG GAS CO.
NEW HOLLAND
PHILADELPHIA
MARCUS HOOK
BALTIMORE
WASHINGTON
QUANTICO
NORFOLK
CHARLESTON
NASHVILLE
DYERSBURG
JACKSON
MEMPHIS
CHATTANOOGA
CALHOUN
ROME
CARTERSVILLE
GADSDEN
CARDOVI
BIRMINGHAM
ATLANTA
MILLEDGEVILLE
McINTYRE
MACON
CHARLESTON
GRENDA
WEST POINT
OHIO
INDIANA
ILLINOIS
KENTUCKY
TENNESSEE
MISSISSIPPI
ALABAMA
GEORGIA
SOUTH CAROLINA
NORTH CAROLINA
VIRGINIA
WEST VIRGINIA
PENNSYLVANIA
MARYLAND
DELAWARE
NEW JERSEY



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Tulsa, Okla.
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[fol. 898] PLAINTIFF'S EXHIBIT 32

Statement Showing Some Examples of Coal Tonnage Lost to Competing Forms of Fuels or Energy in 31 States

(Compiled to November, 1934)

(Source: National Coal Association)

	Displaced by	Actual tonnage lost (Tons)
Alabama:		
Anniston—Anniston Gas Company	Natural Gas	6,000
Cordova—Stephenson Brick Company	Natural Gas	10,000
Gadsden—Gulf States Steel Company	Natural Gas	100,000
Leeds—Universal Portland Cement Company	Natural Gas	100,000
Mobile—Mobile Gas Company	Natural Gas	36,000
Montgomery—Montgomery Gas Company	Natural Gas	20,000
Connecticut:		
Ansonia—Ansonia Manufacturing Company	Oil	1,000
Ansonia—Farrell Birmingham Company	Oil	15,000
Baltic—Baltic Mills	Oil	15,000
Branford—Atlantic Wire Company	Oil	1,500
Bridgeport:		
Bassick Company	Oil	750
Bridgeport Safety Emery Wheel	Oil	200
Bridgeport Street Railway Company	Hydro-Elec.	20,000
Bridgeport Hardware Manufacturing Company	Oil	1,100
Cons. Ashcraft-Hancock Company	Oil	2,300
New Departure Manufacturing Company	Oil	8,700
Singer Manufacturing Company	Oil	10,000
Bristol:		
Bristol Brass Corporation	Oil	7,500
New Departure Manufacturing Company	Hydro-Elec.	10,000
Wallace Barnes Company	Hydro-Elec.	6,000
Chester—Jennings-Russell Manufacturing Co.	Oil	1,500
Collinsville—Collins Company	Oil	3,100
Cromwell—Pierson, Inc., A. W.	Oil	2,000
Dayville—Assawaugan Company	Oil	6,000
Deep River—Dennison Bros.	Oil	300
Deep River—White Wash Laundry	Oil	100
Derby—Driscoll Wire Company	Oil	1,000
Danielson—Larkin Reed Corp.	Oil	1,200
Easthampton—Gong Bell Manufacturing Co.	Hydro-Elec.	2,000
Easthampton—Hill Brass Company	Hydro-Elec.	2,000
East Hartford—Pratt & Whitney Aircraft Co.	Oil	8,000
Elmwood—Abbott Ball Company	Oil	2,500
Forestville—Barnes Company, Wallace	Oil	2,100
Forestville—Sessions Clock Company	....	5,000
Glastonbury—Williams Company, J. B.	Oil	3,000
Groton—Electric Boat Company	Oil	2,500

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Hartford:		
American Wire Works Company	Oil	300
Billings & Spencer	Hydro-Elec.	9,000
Clark, Cuttaway, Harrow Company	Hydro-Elec.	1,500
Cushman Church	Oil	1,000
Colt Patent Firearms Company	Oil	20,000
Fuller Brush Company	Hydro-Elec.	8,000

PLAINTIFF'S EXHIBIT 24—Continued

	Displaced by	Actual tonnage lost (Tons)
Frissell Fabric Company	Hydro-Elec.	1,500
General Cigar Company	Oil	3,000
Hartford Electric Light Company	Oil	140,000
Hartford Gas Company	Oil	11,000
Hartford Street Railway Company	Hydro-Elec.	10,000
Martin-Parry Corporation	Oil	400
Pratt & Whitney Company	Oil	10,000
Puritan & Smith	Oil	400
Royal Typewriter Company	Hydro-Elec.	8,000
Skayke Ball Bearing Company	Oil	500
Terry Steam Turbine Company	Oil	3,000
Union Drawn Steel Company	Oil	5,000
Meriden:		
Guarantee Hard Wheel Company	Oil	900
Handell Company	Hydro-Elec.	1,500
Manning Bowman & Company	Hydro-Elec.	5,000
Meriden Electric Light Company	Hydro-Elec.	8,000
Meriden Street Railway Company	Hydro-Elec.	4,000
Miller Company	....	7,000
Middletown:		
Middletown Electric Light Company	Hydro-Elec.	5,000
Middletown Street Railway Company	Hydro-Elec.	4,000
Russell Manufacturing Company	Hydro-Elec.	5,000
Tuttle Brick Company	Oil	5,000
Wesleyan University	Oil	2,500
Wilcox Crittendon Company	Oil	800
	Hydro-Elec.	3,000
Wilcox Lace Company	Oil	800
Mt. Carmel—Lyons Manufacturing Company	Oil	1,000
Mystic—Packer Manufacturing Company	Oil	1,250
Naugatuck—Eastern Malleable Iron Company	Hydro-Elec.	18,000
New Britain:		
Fafnir Bearing Company	Oil	3,000
Landers, Frary & Clark	Oil	9,000
New Britain Electric Light Company	Hydro-Elec.	10,000
New Britain Machine Company	Oil	1,200
North & Judd Manufacturing Company	Hydro-Elec.	10,000
Stanley Works	Oil	3,000
New Canaan—New Canaan Laundry	Oil	200
New Haven:		
Corsitry, Inc.	Oil	1,200
New Haven Screw Company	Oil	1,000
Stiles Brick Company	Oil	3,000
United Smelting & Aluminum Company	Oil	700

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New London:		
New London Electric Light Company	Hydro-Elec.	12,000
New London Street Railway Company	Hydro-Elec.	7,000
Palmer Bros. (also Montville, Conn.)	Hydro-Elec.	2,500
New Milford—Robertson Bleachery & Dye Works	Oil	5,900
Norwalk—American Hat Company	Oil	3,000

PLAINTIFF'S EXHIBIT 21—Continued

	Displaced by	Actual tonnage lost (Tons)
Norwich—Atlantic Carton Company	Oil	1,500
Norwich—Norwich Belt Manufacturing Company	Oil	1,500
Norwich—Norwich Street Railway Company	Hydro-Elec.	5,000
No. Windham—Harris, C. R.	Oil	600
Oakville—Autoyre Company	Oil	1,200
Oakville—Seymour Smith & Sons	Oil	570
Plainfield—Lawton Mills Corporation	Oil	16,000
Plainville—Standard Wheel Bearing Company	Oil	3,800
Plantsville:		
Atwater Manufacturing Company	Hydro-Elec.	1,500
Blakeslee Forging Company	....	1,000
Thompson Drop Forging Company	Hydro-Elec.	600
Portland—Brownstone Quarries	Oil	500
Putnam—Powdrell & Alexander	Hydro-Elec.	1,500
Rainbow—Stevens Paper Co., Edw.	Oil	500
Sandy Hook—Curtis & Son, S.	Oil	250
Seymour—New Haven Copper Company	Oil	6,000
Shelton—Driscoll Wire Company	Oil	1,000
Simsburg—Ensing Bickford Company	Oil	5,000
Southington—Southington Hardware Company	Oil	1,500
So. Manchester—Cheney Bros.	Oil	20,000
So. Norwalk—Nash Engineering Company	Oil	1,500
Springdale—Stamford Rolling Mills Company	Oil	7,000
Stafford Springs—R. I. Worsted Company	Hydro-Elec.	3,000
Stamford—Stamford Rolling Mills	Oil	8,000
Thomaston—Seth Thomas Clock Company	Hydro-Elec.	9,000
Thomaston Manufacturing Company	Oil	800
Torrington—Torrington Electric Light Company	Hydro-Elec.	3,800
Torrington—Torrington Street Railway Company	Hydro-Elec.	3,000
Unionville—Case Manufacturing Company	Oil	2,400
Versailles—Hygiene Fibre Company	Oil	1,500
Versailles—Inland Paper Board Company	Oil	40,000
Wallingford:		
Judd Company, H. L.	Oil	3,000
Municipal Electric Light Company	Hydro-Elec.	3,000
N. Y. Insulated Wire Company	Hydro-Elec.	1,500
Wallace Silver Company, R.	Hydro-Elec.	12,000
Wallingford Steel Company	Oil	2,500
Waterbury:		
Bristol Company	Oil	3,100
Lux Cloth Manufacturing Company	Oil	500
Waterbury Clock Company	Hydro-Elec.	10,000
Waterbury Electric Light Company	Hydro-Elec.	40,000
Waterbury Paper Company	Oil	1,000
Waterbury Rolling Mill Company	Oil	750
	Hydro-Elec.	750
Westbrook—Krothe Bros.	Oil	1,000

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West Haven—Western Electric Company	Oil	250
Winsted—Fitzgerald Manufacturing Company	Oil	1,500
Winsted—Gilbert Clock Company	Hydro-Elec.	3,000
Winsted—Morgan Silver Plate Company	Oil	800
Winsted—Strand & Sweet	Oil	1,500
Windsor—Windsor Company	Oil	1,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Windsor Locks:		
American Writing Paper Company	Oil	14,000
Cent. Conn. Light & Power Company	Hydro-Elec.	2,000
Montgomery, Geo. M.	Oil	4,000
Montgomery Company, J. R.	Oil	1,800
Delaware:		
Dover—Romeo & Company, F.	Oil	300
New Castle—Delaware Rayon Company	Oil	10,000
Wilmington—National Vulcanized Fibre Co.	Oil	18,000
Florida:		
Fernandina—Florida Phosphate Mines	Oil	20,000
Jacksonville—Logan Coal & Supply Company	Oil	20,000
Pensacola—Pensacola Gas Company	Natural Gas	3,000
Georgia:		
Adairsville—Hood Brick Company, B. M.	Natural Gas	1,300
Atco—Goodyear Cleanwater Mills	Hydro-Elec.	15,000
Atlanta:		
American Can Company	Natural Gas	1,100
Atlantic Biltmore Hotel	Natural Gas	3,500
Atlantic Gas Light Company	Natural Gas	40,000
Atlantic Ice & Coal Company	Hydro-Elec.	20,000
Atlantic & Pacific Bakery Company	Natural Gas	500
Atlantic Steel Company	Natural Gas	75,000
Block Candy Company	Natural Gas	500
Chevrolet Motor Company	Gas & Oil	3,100
Citizens & Southern Natl. Bank Building	Natural Gas	.....
Emory University	Natural Gas	.....
Exposition Cotton Mills	Hydro-Elec.	20,000
Georgia Baptist Hospital	Natural Gas	1,100
Georgia Terrace Hotel	Natural Gas	1,750
National Biscuit Company	Natural Gas	700
Stone Baking Company	Natural Gas	1,100
U. S. Prison	Natural Gas	12,500
U. S. Veterans Hospital	Natural Gas	1,400
Wilson & Company	Natural Gas	.....
Cartersville—Thompson-Weiman Company	Natural Gas	1,100
Cedartown—Standard Cotton Mills	Natural Gas	1,350
Cedartown—U. S. Finishing Company	Natural Gas	350
Columbus—Eagle Phoenix Mills	Hydro-Elec.	20,000
Gainesville—Gainesville Cotton Mills	Hydro-Elec.	10,000
Griffin—Ideal Bakery	Natural Gas	50
Griffin—Ponoma Products Company	Natural Gas	800
La Grange—Calloway Group Mills	Hydro-Elec.	15,000
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McIntyre—Akron Pigment Company	Natural Gas	350
McIntyre—Edgar Products Company	Natural Gas	14,500
Macon—Atlantic Ice & Coal Company	....	15,000
Macon—Bibb Manufacturing Company	Hydro-Elec.	15,000
Macon—Carling Tile Company	Natural Gas	5,250
Macon—Dempsey Hotel	Natural Gas	1,000
Milledgeville:		
Georgia State College	Natural Gas	600
Oconee Clay Products Company	Natural Gas	3,500
Natural gas company has run a line down from Macon and this will displace coal in the amount of	....	150,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Rockmont—Southern States Portland Cement Co.	Natural Gas	38,500
Rome—Atlanta Plow Company	Natural Gas	1,200
Rome—Rome Hosiery Mills	Natural Gas	17,000
Savannah—Savannah Electric Company	Oil	50,000
Savannah—Savannah Sugar Refinery business	Oil	50,000
Iowa:		
Cedar Rapids:		
Three Minute Cereal Company	....	15,000
Penick & Ford, Inc.	....	100,000
Sinclair Company, T. M.	....	40,000
Council Bluffs:		
Abraham Lincoln High School	Natural Gas	400
Deaf & Dumb State School	Natural Gas	3,500
Gooch Food Products	Natural Gas	500
Hurd Creamery	Natural Gas	3,750
J. Edmundson Hospital	Natural Gas	3,200
Lainson, Florist	Natural Gas	3,750
Sisters of Mercy	Natural Gas	1,500
Wilcox, Florists	Natural Gas	6,000
Woodward Candy Company	Natural Gas	2,500
Davenport—Kohrs Packing Company	....	8,000
Davenport—Western Flour Mills	....	17,500
Iowana—Riverside Power Manufacturing Co.	....	65,000
Linwood—Dewey Portland Cement Company	....	135,000
Mason City:		
Decker, Jacob & Company	....	25,000
Electric Light Plant Company	....	25,000
Lehigh Portland Cement Company	....	112,000
Mason City Brick & Tile Company	....	65,000
Northwest States Portland Cement Co.	....	160,000
Peoples Gas & Elec. Company	....	20,000
Muscatine—Heinze Company, H. J.	....	Undetermined
Perry—Federal Public Service Company	Natural Gas	4,000
Sioux City:		
Armour Packing Company	Natural Gas	20,000
Catholic Institutions	Natural Gas	6,000
Cudahy Packing Company	Natural Gas	20,000
Morrill & Company, John	....	35,000
Sioux City Gas & Elec. Company	....	80,000
Swift Packing Company	Nat. Gas (60%)	22,000

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Illinois:		
Alton—Owens-Illinois Glass Company	....	200,000
Chicago:		
Crane Company	....	50,000
Domestic household consumers (23,000 burners installed in houses since July 1, 1933)	Natural Gas	250,000
General American Tank Car Company	....	30,000
Lever Bros.	....	50,000
Republic Steel Corporation	Natural Gas	.....
Water gas sets and coal formerly used for manufacturing water gas coke at State Line Generating Company	....	1,000,000
Swift & Company	....	250,000
Depue—Mineral Point Zinc Company	....	30,000 to 50,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (tons)
East St. Louis:		
Aluminum Ore Company	Natural Gas	400,000
Alco Ore Company	....	250,000
O'Bear Nester Glass Company	....	30,000
Eagle Pitcher Lead Company	....	3,000
Granite City:		
Granite City Steel Company	....	70,000
Natl. Enameling & Stpg. Company	....	30,000
Union Starch & Rfg. Company	....	60,000
Joliet—American Can Company	....	12,000
Joliet—Ruberoid Company	....	35,000
Ottawa—Libbey-Owens-Ford Company	....	75,000
Ottawa—Natl. Plate Glass Company	....	225,000
Roley—American Maize Products Company	....	100,000
Streator—Mississippi Glass Company	....	40,000
Streator—Owens-Illinois Glass Company	....	90,000
Waukegan—Johns Manville Company	....	50,000
Woodward—Roxana Corporation	Oil	125,000
Woodriver—Standard Oil Company	Oil	250,000
Indiana:		
East Chicago—Cudahy Packing Company	....	10,000
Kansas:		
Emporia:		
Axe Bros. Bakery	Natural Gas	50
Broadview Hotel	Natural Gas	400
Citizens National Bank	Oil	100
College of Emporia	Natural Gas	500
Congress Apartments	Natural Gas	75
Humphrey's Bakery	Natural Gas	100
Martin Laundry	Oil	600
Newman Memorial Hospital	Oil	500
New Process Laundry	Oil	1,000
St. Mary's Hospital	Oil	400
State Teachers College	Oil	1,200
Junction City—Entire business district	Natural Gas	5,000
Manhattan—Kansas State Agr. College	Natural Gas	15,000
Ottawa—High School	Natural Gas	400
Ottawa—Ottawa College	Natural Gas	600
Ittawa—Ottawa College	Natural Gas	600
Tecumseh—Kansas Power & Light Company	Natural Gas	50,000

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Topeka:		
Beatrice Creamery	Natural Gas	7,500
Christs Hospital	Natural Gas	800
City Hand Laundry	Natural Gas	1,200
Grace Cathedral	Natural Gas	1,000
Kansan Hotel	Natural Gas	600
Kansas Power & Light Company	Natural Gas	10,000
Merrill Packing Company	Natural Gas	15,000
Seymour Packing Company	Natural Gas	7,500
Topeka Packing Company	Natural Gas	200
Topeka Pure Milk Company	Natural Gas	2,000
Louisiana:		
Bogalusa—Bogalusa Paper Company	Natural Gas	60,000
Baton Rouge—State University	Natural Gas	5,000
New Orleans—American Sugar Refining Co.	Natural Gas	150,000
New Orleans—New Orleans Public Service Co.	Natural Gas	275,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Maine:		
Auburn—Cushman Hollis Shoe Company	Oil	3,000
Augusta—Cushnoc Paper Company	Oil	25,000
Belfast—Amer. Agricultural Chemical Co.	Hydro-Elec.	5,000
Brewer—Eastern Manufacturing Company	Oil	30,000
Bethel—Bethel Inn	Oil	400
Biddeford—Pepperell Manufacturing Company	Hydro-Elec.	10,000
Biddeford—Trull Hospital	Oil	150
Bucksport—Maine Seaboard Paper Company	Hydro-Elec.	40,000
Fairfield—Keyes Fibre Company	Oil	10,000
Farmingdale—Central Maine Power Company	Oil	5,000
Lewiston—Lewiston Electric Company	Oil	1,000
Lincoln—Eastern Manufacturing Company	Oil	1,000
Livermore Falls—International Paper Company	Oil	60,000
Madison—Great Northern Paper Company	Oil	30,000
Milo—American Thread Company	Hydro-Elec.	5,000
Norway—Tubbs Manufacturing Co.	Hydro-Elec.	500
Old Town—Old Town Canoe Company	Hydro-Elec.	1,000
Oakland—North Wayne Tool Company	Hydro-Elec.	500
Pejepscot—Pejepscot Paper Company	Oil	15,000
Portland:		
Ayer-Houston Company	Oil	1,500
American Can Company	Oil	1,000
Bancroft & Martin	Oil	10,000
Burnham & Morrill	Oil	1,000
Cumberland Co. Power & Light Company	Oil	10,000
Central Maine Cold Storage Company	Oil	1,200
Chapman Building	Oil	3,000
Columbia Coal Storage Company	Oil	350
Congress Square Hotel	Oil	5,000
Emery Waterhouse Company	Oil	125
Globe Laundry	Oil	800
Greely Laundry	Oil	800

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Hotel Lafayette	Oil	500
Henley-Kimball Company	Oil	200
Hinds Building	Oil	400
Maine Eye & Ear Infirmary	Oil	1,500
N. E. Cold Storage Company	Oil	3,000
Porteus Mitchell & Braun	Oil	300
Police Department Headquarters	Oil	100
Portland Buick Company	Oil	200
Ramsdell Packing Company	Oil	350
Strand Building	Oil	250
Seacoast Tanning Company	Oil	350
St. Barnabas Hospital	Oil	800
State Building	Oil	...
State Street Hospital	Oil	300
Trelawney Building	Oil	250
Winslow & Company	Oil	3,000
Rockland—Lawrence Packing Company	Oil	350
Rumford—International Paper Company	Oil	25,000
Saco—York Manufacturing Company	Hydro-Elec.	15,000
Sanford—Sanford Mills	Oil	25,000
Sanford—Goodall Worsted Company	Oil	25,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Searsport:		
American Agricultural Chemical Company	Hydro-Elec.	10,000
Armour & Company	Hydro-Elec.	500
Summers & Company	Hydro-Elec.	500
Skowhegan—Maine Spinning Company	Hydro-Elec.	2,000
South Brewer—Eastern Manufacturing Company	Oil	500
South Lincoln—American Thread Company	Hydro-Elec.	5,000
South Windham—Androscoggin Pulp Company	Oil	18,000
Waterville—Keyes Fibre Company	Oil	40,000
Waterville—Wyandotte Worsted Company	Oil	4,000
Westbrook—Dana Warp Mills	Oil	3,000
Wilton—Blue Mountain Inn	Oil	100
Wilton—Wilton Woolen Mills	Oil	5,000
Maryland:		
Baltimore:		
American Paving & Contracting Co	Oil	3,600
Anchor Post Fence Company	Oil	300
Baltimore Steam Packet Company	Oil	28,000
Commercial Pigments Company	Oil	750
Consolidated Gas, Elec. Light & Power Co.	Hydro-Elec.	58,000
Davidson Chemical Company	Oil	1,000
Ellicott Machine Corporation	Hydro-Elec.	1,000
Foote & Co., Inc., D. E.	Hydro-Elec.	500
Grebb, Louis	Hydro-Elec.	300
Greenwald, Inc.	Oil	2,000
Griffith & Boyd	Hydro-Elec.	100
Gunthers Brewery	Oil	5,000
High Pressure Pumping Station	Oil	5,000
Hinde & Dauch Paper Company	Oil	850
Lighthouse Service Company	Oil	2,000
Miller Fertilizer Company	Hydro-Elec.	2,500
[fol. 906]		
Mutual Chemical Company	Oil	30,000
Oles Envelope Company	Oil	100
Prudential Oil Corporation	Oil	15,000
Renneberg & Son, Edw.	Oil	200
Standard Fruit & S. S. Co	Oil	12,000
Tin Decorating Company	Oil	5,000
University Hospital	Oil	3,600
Weiskittell & Sons Co., A.	Oil	1,000
Frederick—Corp. of Frederick	Oil	1,500
Savage—Savage Manufacturing Company	Hydro-Elec.	4,000
Woodsboro—Barrick & Sons, S. W.	Hydro-Elec.	600
Massachusetts:		
Andover—Tyler Rubber Company	Oil	5,000
Assonet—Crystal Dye & Bleachery Co.	Oil	700
Attleboro:		
Apco Mossberg Corporation	Oil	1,000
Bigney Company, S. O.	Oil	500
Briggs Company, D. F.	Oil	700
Eden Company, C. H.	Oil	250
Makepeace Company, D. E.	Oil	800
Mossberg Pressed Steel Co.	Oil	6,000
Simmons Company, R. P.	Oil	560
Tappan Bros.	Oil	500
Union Plate & Wire Company	Oil	1,000
Watson Company	Oil	500

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Wolfenden & Sons Company, R.	Oil	5,000
Ayer—Ayer Electric Light Company	Hydro-Elec.	400
Ayer—Ayer Water Works	Hydro-Elec.	1,200
Beverly—United Shoe Machinery Company	Oil	10,000
Blackington—Blackington Company	Hydro-Elec.	500
Bondville—Bondville Bleachery & Dye Works	Oil	7,500
Bondville—Boston Duck Company	Oil	7,500
Boston:		
American Rubber Company	Oil	1,000
Ashton Valve	Oil	1,200
Badger Building	Oil	1,200
Boston City Hospital	Oil	20,000
Cabot, Cabot & Forbes Bldg.	Oil	6,000
Catholic Institutions	Oil	7,000
Christian Science Church	Oil	3,000
City of Boston Fire Department	Oil	5,000
City of Boston Schools	Oil	9,000
City of Boston Supply Company	Oil	25,000
Commonwealth Pier No. 5	Oil	2,800
Copley Plaza Hotel	Oil	4,000
Eastern S. S. Company—Bunkers	Oil	25,000
Edison Electric Ill. Company	Hydro-Elec.	125,000
Eliott Addressograph Company	Oil	3,000
Employers Liability Bldg.	Oil	4,000
Filene's Sons Company, Wm.	Oil	6,000
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Toss Co., H. C.	Oil	1,200
Franklin Sq. House	Oil	1,000
Free Hosp. for Women	Oil	3,000
Gillette Safety Razor	Oil	15,000
Gypsum Co., U. S.	Oil	15,000
J. Hancock Life Ins. Co.	Oil	1,000
Hildreth Co., H. A.	Oil	2,000
Holtzer-Cabot Elec. Co.	Oil	900
Hotel Somerset	Oil	2,000
Kinney Mfg. Co.	Oil	400
Lambrette-Garnette Mills	Oil	400
Mass. General Hospital	Oil	10,000
Mass. Memorial Hospital	Oil	1,000
New Eng. Confectionery Co.	Oil	4,000
Nordblom's Bldgs., R. A.	Oil	20,000
Old Colony Trust Co.	Oil	1,000
Page & Shaw	Oil	1,200
Pilgrim Laundry	Oil	1,000
Plant Co., Thos. B.	Oil	20,000
Prince Co., S. S.	Oil	1,200
Quincy Mkt. & C. S. Whse Co.	Oil	20,000
Revere Sugar Refining	Oil	25,000
Salada Tea Co.	Oil	1,000
Simmons College	Oil	1,800
Simplex Wire & Cable Co.	Oil	4,000
Standard Oil Co.	Oil	2,500
State House	Oil	4,000
Stone & Webster	Oil	4,000
Security Mills	Oil	3,000
Squire Co., John B.	Elec.	20,000
United Carr Fastner Co.	Oil	5,000
United Drug Co.	Oil	8,000
United Fruit Co.—Bunkers	Oil	60,000
Woods Machine Co., S. A.	Oil	1,000
Bridgewater—White Shoe Co., L. L.	Oil	4,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Brockton:		
Barbour Welting Co.	Oil	1,600
Goldthwaite, C. H.	Oil	300
Plymouth County Div.—Goudy Factory	Oil	700
White Star Laundry	Oil	1,200
Brookline—Chestnut Hill Pumping Sta.	Oil	10,000
Cambridge:		
Aldens Speare's Sons Co.	Oil	1,000
American Rubber Co.	Oil	5,000
Ashton Valve Co.	Oil	1,200
[fol. 908]		
Briggs Co., C. A.	Oil	1,800
Harvard	Elec.	3,600
Dewey & Almy Chemical Co.	Oil	1,500
Hews & Co., A. H.	Oil	1,800
Ford Motor Co.	Oil	250
Harvard Stillman Infirmary	Oil	500
Johnson Educator Food Co.	Oil	500
Library Bureau	Oil	1,500
Mansion House Ice Cream Co.	Oil	350
N. E. Confectionery Co.	Oil	3,000
Rand-Kardex Bureau, Inc.	Oil	600
Sawyer & Son, H. M.	Oil	500
Canton:		
Plymouth Rubber Co.	Oil	3,000
Springdale Finishing Co.	Oil	4,000
Careyville—Taft Woolen Co.	Elec.	1,200
Charlestown—Stickeny & Per Co.	Oil	1,200
Charlestown—W. F. Schrafft & Sons	Oil	8,000
Chartley—Holmes Co.	Oil	1,000
Chartley—Study Bros.	Oil	500
Chester—Cortland Grinding Wheeler Corp.	Oil	700
Chelsea—Forbes Lithograph Co.	Oil	5,000
Chelsea—Mexican Petroleum Corp.	....	.....
Chelsea—Revere Rubber Co.	Oil	30,000
Chicopee—Moore Drop Forging Co.	Oil	18,500
Chicopee Falls—Stevens Arm Co.	Elec.	10,000
City Mills—Buckley & Mann Inc.	Elec.	2,500
Clinton:		
Bigelow-Sanford Carpet Co.	Oil	20/25,000
Brusquet, N.	Oil	30
Clinton Trust Co.	Oil	200
Conti, A. E.	Oil	100
Johnson, Allen	Oil	90
Roubaix Mills, Inc.	Oil	750
Cliquot—Safepack Mills	Oil	1,000
Concord—Concord Municipal Light Co.	Oil	5,000
Concord—Public Serv. Co.	Elec.	40,000
Dighton—Anchor Color & Game Works	Elec.	500
Dighton—Mt. Hope Finishing Co.	Oil	20,000
Dodgeville—Dodgeville Finishing Co.	Elec.	500
Dudley—Dudley Paper Co.	Oil	1,000
E. Barintree—City Service Refining Co.	Oil	5,000
East Boston—Bethlehem Shipbuilding Corp.	Oil	3,000
East Boston—Maverick Mills	Oil	4,000
E. Bridgewater—Edison Elec. Ill. Co. of Brockton	Oil	20,000
E. Dedham—Dedham Finishing Co.	Oil	5,000
E. Hampton—Western Mass. Co.	Elec.	1,500
E. Cambridge—House of Correction	Oil	2,700

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
E. Mansfield—Dustin Bros. Greenhouses	Oil	500
East Taunton—Chandler Oilcloth Co.	Oil	3,000
East Whittenton—Whittenton Mfg. Co.	Oil	8,000
[fol. 909]		
Everett:		
American Solv. & Chem. Corp.	Oil	8,000
Carpenter-Morton Co.	Oil	400
Everett Factories	Oil	1,000
Merrimac Chemical Co.	Oil	40,000
Fall River:		
American Printing Co.	Oil	35,000
F. R. Elec. Light Co.	Oil	20,000
Mechanix Fdry. & Mach. Co.	Elec.	500
Farnams—U. S. Gypsum Co.	Oil	24,700
Farnumsville—Wuskanut Mills	Oil	3,500
Fitchburg:		
American Hand Laundry	Oil	50
Christ Church	Oil	130
Crocker-Burbank Ass'n.	Oil	35,000
De Jonge Co., Louis	Elec.	2,000
Faluah Paper Co.	Elec.	1,500
Falulah Paper Co.	Oil	25,000
Grant Yarn Co.	Oil	10,000
Hardy & Sons Co.	Oil	115
Ideal Hand Laundry	Oil	60
Padula, J. A. (Bakery)	Oil	150
Sacred Heart Church	Oil	250
St. Francis Church	Oil	180
St. Joseph's Church	Oil	200
Snow-White Laundry	Oil	125
Swanson Bakery	Oil	400
Florence—International Silver Co.	Elec.	7,500
Fore River—Bethlehem Steel Corp.	Oil	10,000
Framingham—Boston, Worchester & N. Y. St. Ry.	Elec.	5,000
Framingham:		
Butterworths Greenhouses	Oil	500
Int. Engineering Corp.	Oil	1,000
Int. Engg. Co.	Oil	1,200
Hodgman Rubber Co.	Oil	2,000
Lakeview Press	Oil	300
Franklin:		
Appleton Rubber Co.	Oil	5,000
Clark, Cutter & McDermott	Oil	1,000
Franklin Yarn Co.	Elec.	800
Haywood Woolen Co.	Elec.	1,200
Gardner:		
City of Gardner Water Dept.	Elec.	250
Collier-Keyworth Co.	Elec.	500
Gardner Auto Co.	Oil	50
Gardner Elec. Light Co.	Elec.	2,000
Gardner Upholstered Co.	Elec.	500
Heywood Hospital	Oil	600
Heywood Wakefield Co.	Elec.	6,000
Mahoney Chair Co.	Elec.	500
Parker Bros.	Oil	50
Silbert Co., A. W.	Elec.	500

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Gloucester:		
Booth Fisheries	Oil	300
[fol. 910]		
Cape Ann Quarry Co.	Oil	500
Gloucester Elec. Lt. Co.	Oil	2,000
Greenfield:		
Greenfield Gas Light Co.	Oil	1,400
Greenfield Tap & Die Corp.	Oil	1,400
Groton:		
Groton Private Hospital	Oil	60
Groton Water Co.	Elec.	200
Sacred Heart Church	Oil	60
Cuttyhunk—William Wood	....	.....
Halifax—Halifax Gorden Co.	Oil	2,000
Haverhill:		
Archibald, F., Inc.	Oil	4,500
Building Trust Co.	Oil	2,500/3,000
Allen, Edgar L.	Oil	100
Snyder Shoe Co.	Oil	500
Stevens, M. T. & Sons, Co.	Oil	10,000
Hebronville—Ray Cotton Co.	Elec.	2,000
Holyoke:		
Affect Ruling & Stationery Co.	Oil	30
American Tissue & Paper Co., 12,000 Elec.	Oil	1,200
Buchanan Bolt & Wire	Oil	500
Eureka Blank Book Co.	Oil	225
Holyoke Electric Co.	Elec.	20,000
Holyoke Street Ry.	Elec.	10,000
Holyoke Water Power Co.	Elec.	5,000
Judd Paper Co.	Oil	75
Marvellum Paper Co.	Elec.	8,000
Mt. Holyoke College	Oil	5,000
Skinner & Sons Co.	Elec.	20,000
Small Plants	Elec.	500
Taylor Logan Paper Co.	Elec.	5,000
White & Wycoff	Elec.	9,000
Worthington Pump Co.	Elec.	5,000
Hopedale—Draper Co.	Elec.	10,000
Hudson:		
Elks Block	Oil	200
Elm Theatre	Oil	250
Hudson Co. Operative Bank	Oil	150
Hudson Light & Power Plant	Oil	2,500
Hudson National Bank	Oil	200
Hudson Worsted Co.	Oil	4,000
Huntington—Lovering Co., Wm. M.	Oil	700
Indian Orchard—Chapman Valve Mfg. Co.	Oil	3,000
Indian Orchard—Orchard Co.	Oil	4,700
Ipswich—Burke & Son, F. L.	Elec.	1,500
Lawrence:		
Amer. Woolen Co. (Washington M.)	Oil	55,000
Amer. Woolen Co. (Wood Mills)	Oil	195,000
Capital Theatre	....	.....
Farwell Bleachery	Oil	6,000
Harwig Motor Co.	Oil	150
Holy Rosary Church	Oil	125
Jersey Ice Cream Co.	Oil	350

PLAINTIFF'S EXHIBIT 32—Continued

[fol. 911]

	Displaced by	Actual tonnage lost (Tons)
Lawrence:		
Klous, H.	Oil	1,000
Meadow Brook Laundry	Oil	500
Merchants Trust Co.	Oil	40
Monomac Spinning Co.	Oil	8,500
Pacific Mills	Oil	100,000
St. Augustine's Church	Oil	125
St. Mary's Convent	Oil	75
Leominster—Dupont Viscaloid Co.	Oil	12,000
Leominster—Leominster Elec. Light Co.	Elec.	5,000
Lowell:		
American Woolen Co. (Bay State M.)	Oil	6,000
Bagshaw & Co., W. H.	Oil	1,000
Lawrence Mfg. Co.	Oil	10,000
Merrimac Mfg. Co.	Oil	30,000
Nasbina Mfg. Co.	Oil	5,000
Post Office Garage	Oil	100
Waterhead Mills, Inc.	Oil	7,500
U. S. Bunting Co.	Oil	10,000
Lunenburg—Fish Farm	Oil	150
Lynn—Lydia Pinkham Medicine Co.	Oil	500
Malden—Boston Rubber Shoe Co.	Oil	5,000
Malden:		
Converse Rubber Co.	Oil	3,500
Family Laundry	Oil	300
Halycon Laundry Co.	Oil	800
Malden Elec. Co.	Elec.	1,000
Malden Knitting Mills	Oil	3,000
Potter Drug & Chem. Corp.	Oil	1,500
Revere Knitting Mills	Oil	100
Wadsworth Howland Co.	Oil	500
Mansfield—Chocolate Refiners, Inc.	Oil	4,000
Mansfield—Mansfield Bleachery	Oil	5,000
Marlboro—Duane Shoe Co.	Oil	100
Marlboro Wine Goods Co.	Oil	200
Maynard:		
American Powder Co.	Oil	3,000
Assabet Savings Bank	....	.....
Case, W. B.	Oil	100
Cleary, Genevieve	Oil	50
Fowler, Guyer	Oil	100
Gruber Bros.	Oil	100
Guyer Fowler	Oil	100
Maynard Trust Co.	....	.....
Roosevelt School	Oil	150
Medfield—Mitchell Co., E. B.	Oil	3,000
Medford:		
Amrad Corp.	Oil	500
Gair Co., Robt. Medford Br.	Oil	500
Solvent Products Co.	Oil	300
Tufts College	Oil	4,000
Warner & Childs	Oil	900
Worchester Paper Box Corp.	Oil	1,000

PLAINTIFF'S EXHIBIT 32—Continued

[fol. 912]	Displaced by	Actual tonnage lost (Tons)
Middleboro:		
Maxim Motor Co.	Oil	150
Middleboro Poor Farm	Oil	100
Middleboro Savings Bank	Oil	100
Milibury—Felters Co.	Oil	1,500
Millis—Safe Pack Co.	Oil	1,500
Millville—Woonsocket Rubber Co.	Oil	2,500
Milton—Baker & Co., Inc., Walter	Oil	12,000
Natick:		
Natick Box & Board Co.	Oil	5,000
N. E. Pressed Steel Co.	Oil	1,500
New Bedford:		
Acushnit Process Co.	Elec.	2,500
Beacon Mfg. Co.	Oil	12,000
Bristol Mfg. Co.	Oil	5,000
Dartmouth Mfg. Co.	Oil	15,000
Devon Mills	Elec.	3,000
Firestone Cotton Mills	Elec.	4,500
Fisk Rubber Co.	Oil	10,000
Fisk Tire Fabric Co.	Elec.	3,500
Grinnell Mfg. Co.	Oil	3,000
National Spun Silk	Oil	6,000
Neild Mfg. Co.	Oil	4,500
New Bedford Rayon Co.	Elec.	5,000
Wamsutta Mills	Oil	18,000
Whitman Mills	Oil	12,000
Newton—Boston College	Oil	2,000
Newton—Saxony Worsted Mills	Oil	700
Newton—Security Mills, Inc.	Oil	3,000
Newton U. Falls—Stowe & Woodward Co.	Elec.	500
Northampton—Belding Hemingway Co.	Oil	2,500
Northbridge—Kupper Bros.	Oil	1,500
Northampton—Northampton Gas Light Co.	Oil	3,000
Northampton—Northampton Street Ry. Co.	Oil	5,000
Northampton—Rogers, Wm. A., Ltd.	Oil	1,400
Northbridge—Whitin Mfg. Co., Paul	Oil	2,500
N. Abingdon—Plymouth Rock Ice Cream Co.	Oil	500
N. Abingdon—Bay State Nurseries	Oil	1,000
N. Attleboro—Banks St. Greenhouses	Oil	400
N. Attleboro—Frank W. Whiting Co.	Oil	500
Page & Baker Mfg. Co.	Oil	800
Whiting Co., Frank W.	Oil	500
N. Cambridge—Dewey & Almy Chem. Co.	Oil	2,000
N. Dighton—Mt. Hope Finishing Co.	Oil	20,000
N. Easton—Ames Shovel & Tool Co.	Oil	2,000
N. Plymouth—Plymouth Cordage Co.	Oil	25,000
Palmer—Better Brushes, Inc.	Oil	200
Palmer—Wickwire-Spencer Steel Co.	Oil	1,400
Peabody—Danvers Bleachery & Dye Works	Oil	3,000
Hunt Rankin Leather Co.	Oil	1,000
Pepperell Water Dept.	....	.....
Pittsfield—Berkshire Street Ry. Co.	Oil	5,900
[fol. 913]		
Pittsfield—Jones & Son, E. H.	Oil	1,000
Maplewood Cleaners & Dyers, Inc.	Oil	500
Pittsfield—N. Eng. Lime Co.	Oil	10,000
Pittsfield—Pittsfield St. Ry. Co.	Elec.	6,000
Plymouth—American Woolen Co.	Oil	3,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Plymouth—Edes Mfg. Co.	Oil	250
Plymouth—Puritan Mills	Oil	6,000
Quincy—Bethlehem Steel Corp.	Oil	10,000
Quincy—Eastern Mass. St. Ry. Co.	Oil	60,000
Reading:		
Reading Elec. Lt. Co.	Elec.	3,000
Reading Rubber Mfg. Co.	Oil	4,000
Reading Sanford Mills, Inc.	Oil	12,000
Revere—Forbes Lith-Mfg. Co.	Oil	5,000
Riverdale—Kupper Bros.	Oil	2,500
Rockport:		
Cape Ann Tool Co.	Oil	500
Johnson Quarry	Oil	500
Rockport Anchor Works	Oil	1,500
Russell- Westfield River Paper Co.	Oil	5,900
Salem—Salem Electric Co., Elec. 60,000	Oil	10,000
Saundersville—Saunders Cotton Mills	Oil	2,000
Saxonville—Roxburg Carpet Co.	Oil	6,000
Shawsbeen—American Woolen Co.	Oil	25,000
Sheffield—U. S. Gypsum Co.	Oil	10,200
Somerset—Montaup Elec. Light Co.	Oil	250,000
Sommensville—Agar Mfg. Co.	Oil	100
Somerville—No. Packing & Prov. Co.	Oil	18,000
Somerville—Squire & Co., J. P.	Oil	16,000
Southbridge—Amer. Optical Co.	Oil	25,000
Southbridge—Atlas Plywood Corp.	Elec.	1,000
Southbridge:		
Central Optical Co.	Oil	1,000
Hyde Mfg. Co.	Oil	1,000
Littlefield Shuttle Co.	Oil	500
Snell Mfg. Co.	Oil	500
Southbridge Elec. Co.	Elec.	3,500
Southbridge Ptg. Co.	Oil	9,000
Southbridge Finishing Co.	Oil	7,000
Webster Elec. Lt. Co.	Oil	3,000
So. Weymouth—Stetson Shoe Co.	Oil	3,000
So. Wilmington—Merrimac Chemical Co.	Oil	3,000
Springfield:		
Amer. Bosch Magneto Co.	Oil	2,300
Blair Mfg. Co.	Oil	3,000
Elwell Iron Works, H. F.	Oil	800
Gilbert & Barbour	Oil	3,000
Hampden Grindging Wheel Co.	Oil	1,400
Indian Motor Cycle Co.	Elec.	10,000
Moore Drop Forge Co.	Oil	1,200
N. E. Pack. Mach. Co.	Oil	500
[fol. 914]		
Package Machinery Co.	Oil	800
Perkins Soap Co.	Oil	500
Philip Buston, Inc.	Oil	90
Springfield Elec. Lt. Co.	Elec.	40,000
Stoneham:		
Amer. Gelatine Co.	Elec.	4,500
Bay State Box Co.	Elec.	1,500
U. S. Army	Oil	4,000
Stoughton:		
Binton & Co., F. E.	Oil	200
Phillips, F. C.	Oil	150
Shawmut Wollen Mills	Oil	300
Sudbury—Hawes, E. Roy	Oil	100

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Tauton:		
Dudley, Sumner A.	Elec.	500
Glenwood Range Co.	Oil	1,000
Herrodite Finishing Co.	Oil	2,000
Tauton Municipal Light Co.	Oil	18,000
Taunton & N. Bedf. Copper Co.	Oil	15,000
Robertson Motor Car Co.	Oil	200
Stiles & Hart Brick Co.	Oil	3,500
Taunton Knitting Co.	Oil	1,000
Taunton Rubber Co.	Oil	2,500
Whittendon Mfg. Co.	Oil	15,000
Tewksbury—Patton & Co.	Oil	500
Tewksbury—State Infirmary	Oil	10,000
Three Rivers—Otis Co.	Oil	7,500
Turner Falls—Greenfield Tap & Die Corp.	Oil	700
Uxbridge—Worcester Suburban Elec. Co.	Elec.	5,000
Waban—Boston Gardening Co.	Oil	900
Wakefield—Crescent Laundry	Oil	250
Waltham:		
Belgian Enamel Corp.	Oil	1,000
Belgian Spinning Co.	Oil	1,000
Bettinger Spinning Co.	....	.....
Boston Mfg. Co.	Oil	10,000
Potter Pres.	Oil	500
Waltham Bleachery & Dye Works	Oil	5,000
Waltham Foundry Co.	Oil	1,500
Ware—Bliss Fabyan & Co.	Oil	7,500
Watertown:		
Hood Rubber Co.	Oil	20,000
Lewardos, Inc.	Oil	3,000
Watertown Arsenal	Oil	6,000
Webster:		
The Slater Co.	Oil	10,000
(This company cancelled contract for coal with New. Eng. Coal & Coke Co., stating that due to recent reduction in oil price they could not afford to burn coal.)		
Slater & Sons, Inc.	Oil	7,500
Webster Mills	Oil	9,000
Wellesley:		
Babsons Statistical Org.	Oil	1,000
[fol. 915]		
Cafars Greenhouses, A.	Oil	250
Lake Waban Laundry Co.	Oil	500
Wellesley College	Oil	10,000
Westfield:		
Westfield Elec. Lt. Co.	Elec.	4,500
Westfield Mfg. Co.	Oil	1,400
W. Dudley—W. Dudley Paper Co.	Oil	2,500
W. Medway—Stone Mills Co.	Elec.	500
W. Springfield:		
Gelbert & Baker Mfg. Co.	Oil	12,000
New England Smelting Works	Oil	700
Wico Elec. Co.	Oil	1,000
W. Stockbridge—Grangers Mfg. Co.	Oil	500
W. Stockbridge—Lee Lime Corp.	Oil	700
W. Warren—Thorndike Co.	Oil	6,000
Whitinsville—Whitinsville Spin Ring Co.	Oil	3,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Wilkinsonville—Anco Mills	Oil	2,000
Williamstown—Berkshire Fine Spin Assn	Elec.	3,000
Winchendon—General Box Co	Elec.	2,500
Winchendon—Winchendon Elec. Light & P. Co.	Elec.	3,000
Winchester:		
N. England Laundries Co	Oil	500
Puffer Mfg. Co	Oil	1,500
Winchester Ldry. Co	Oil	2,000
Woburn—Bailey & Blendinger Mfg. Co	Oil	500
Woburn—Tribble Cordage Mills	Oil	300
Worchester:		
Adams, J. J	Oil	165
American Optical Co	Oil	200
Amer. Steel & Wire Co	Oil	25,000
Artex Grinding Co	Oil	135
Art Museum	Oil	200
Assumption College	Oil	500
Bieber-Polar Co	Oil	135
Bowker-Hamblin Co	Oil	235
Budish & Kaplan	Oil	135
Calvery Stearns Co	Oil	200
Church of Ascension	Oil	165
City of Worcester (All Places)	Oil	400
John P. Couglin	Oil	135
Crompton & Knowles	Elec.	3,000
Eagles Bldg	Oil	200
Fairlawn Hospital	Oil	335
Federal Baking Co	Oil	165
Fitzgerald West St. (All Places)	Oil	165
Worchester-Hadley Furniture Co	Oil	165
Hahnemann Hospital	Oil	200
Harper, Jos	Oil	135
Hatch & Barnes	Oil	235
Hillcrest Dairy	Oil	200
Holy Name of Jesus Church	Oil	260
Humphrey G. Grafton St	Oil	165
Hyatt, Irving St. (All Places)	Oil	165

[fol. 916]

Johnson Wire	Oil	300
Johnson & Bassett	Oil	265
Lady of Mt. Carmel Church	Oil	165
Lady of Vilna Church	Oil	200
McDermott, Dr. (All Places)	Oil	200
Manning Pie Bakery	Oil	165
Mass. Baking Co	Oil	235
Mass. Protective Assn	Oil	235
Notre Dame Church	Oil	235
Norton Co	Oil	235
Odd Fellows Bldg	Oil	165
Osgood Bradley Car Works	Oil	2,500
Rice, Barton & Wales	Oil	200
Rockwood Sprinkler Co	Oil	2,000
Sacred Heart Church	Oil	235
St. Ann's Church	Oil	135
St. Ann's Orphanage	Oil	235
St. Casimir's Church	Oil	300
St. John's Church (All Places)	Oil	165
St. Mary's Church	Oil	235

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
St. Margaret's Church	Oil	135
St. Matthew's Church	Oil	260
St. Steven's Church	Oil	200
Second Advent Church	Oil	165
Sisters of Mercy	Oil	200
Stafford Iron Works	Oil	165
Standard Foundry	Oil	235
Telegram & Gazette	Oil	265
Washburn & Garfield	Oil	235
Woods, W. J.	Oil	165
Worcester Co-op. Bank	Oil	165
Worcester Elec. Light Co.	Oil	335
Worcester Lawn Mower Co.	Oil	300
Worcester Stamped Metal Co.	Oil	165
Worcester St. Ry. Co., also Millberry, Mass.	Oil	26,000
Worcester Women's Club	Oil	135
White & Bailey Co.	Oil	1,000
Zylonite—Hoosac Valley Lime Co.	Oil	9,200
Zylonite—N. E. Lime Co.	Oil	24,700

[fol. 917]

Michigan:		
Alma—Crystal White Sugar Co.	Oil	10,000
Grand Haven—City of Grand Haven	Oil	14,000
Midland—Dow Chemical Co.	Oil	200,000
Milwaukee—Commonwealth Power Co.	Oil	73,000
Mt. Pleasant—Isabella Sugar Co.	Oil	15,000
Minnesota:		
Albert Lea—Electric Light Plant	Natural Gas	34,000
Albert Lea—Interstate Power Co.	Gas	25,000
Austin—Geo. Hormel & Co.	Gas	35,000
Minneapolis—Minneapolis Gas Light Co.	....	65,000
Minnesota—Minnesota State Institution	....	27,000
Newport—Cudahy Packing Co.	....	15,000
Northfield—Carleton College	....	4,000
Owantonna—City Light Plant	Natural Gas	10,000
Rochester—City Light Plant	Natural Gas	16,000
Rochester—Franklin Heating System	Natural Gas	10,500
Rochester—State Hospital	Natural Gas	10,500
St. Paul—Armour & Co.	....	90,000
St. Paul—Swift & Co.	....	75,000
Mississippi:		
Biloxi—Biloxi Gas Co.	Natural Gas	10,000
Bulport—Miss. Power Co.	Natural Gas	30,000
Jackson—Buckeye Cotton Oil Co.	Natural Gas	10,000
Jackson—Jackson Gas Co.	Natural Gas	10,000
Laurel—Masonite Corp.	Natural Gas	25,000
Meridian—Insane Hospital	Natural Gas	8,000
Missouri:		
Crystal City—Pittsburg Plate Glass Co.	Natural Gas	180,000
Jefferson City—Mo. Power & Light Co.	Natural Gas	47,500
Hines—St. Louis County Water Co.	Electric	13,500
Kansas City—Armour & Co.	Natural Gas	120,000
Kansas City—Cudahy Packing Co.	Natural Gas	48,000
Kansas City—Standard Oil	Natural Gas	327,500
Kansas City—Swift & Co.	Natural Gas	48,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Kansas City—Wilson Packing Co.	Natural Gas	48,000
St. Louis—Alpha Portland Cement Co.	Gas	80,000
St. Louis—American Can Co.	....	2,000
St. Louis—Crunden Martin Mfg. Co.	....	5,000
St. Louis—Evans & Howards Service Co.	....	20,000
St. Louis—General Cables Corp.	....	5,000
St. Louis—Hydraulic Press Brick Co.	....	25,000
St. Louis—Krey Packing Co.	....	12,000
St. Louis—Laclede Christy Clay Products Co.	Gas	20,000
St. Louis—Mississippi Glass Co.	....	30,000
St. Louis—Monarch Metal Products Co.	....	150
St. Louis—Orchard Paper Co.	....	600
St. Louis—Quick Meal Store Co.	....	8,000
St. Louis—St. Louis Malleable Casting Co.	....	6,000
Nebraska:		
Hastings—Municipal Light Plant	Natural Gas	4,600
Lincoln—Iowa-Nebraska St. & Power Co.	Natural Gas	90,000
Omaha—Armour Packing Co.	Natural Gas	127,500
Omaha—Cudahy Packing Co.	Natural Gas	55,000
Omaha—Dold Packing Co.	Natural Gas	18,250
So. Omaha—Armour & Co.	....	100,000
So. Omaha—Cudahy Packing Co.	....	5,000
[fol. 918]		
New Hampshire:		
Berlin:		
Berlin Street Railway Co.	Elec.	2,500
International Paper Co.	Oil	10,000
Belmont Hosiery Co.	Elec.	1,000
Claremont:		
Claremont Paper Co.	Oil	5,000
Magnet Theatre	Oil	200
St. Mary's Church	Oil	150
Concord—Perry Bros. Granite Co.	Elec.	400
Conway—Conway Elec. Light & Power Co.	Elec.	1,500
Danbury—Danbury Light & Power Co.	Elec.	1,000
Dover—Pacific Mills	Elec.	15,000
E. Andover—East Andover Light & Power Co.	Elec.	1,500
Franklin:		
Buell Block	Oil	100
Franklin Light & Power Co.	Elec.	2,000
Franklin National Bank	Oil	200
Griffin Co., G. W.	Oil	500
Pastime Theatre	Oil	60
Pourtois Block	Oil	25
Proctor Block	Oil	30
Stewart Block	Oil	75
Sulloway Mills	Oil	3,800
Hanover—Dartmouth College	Oil	10,000
Hill—Hill Light & Power Co.	Elec.	2,000
Keene:		
Hotel Ellis	Oil	150
Perkins Machine Co.	Oil	125
St. Bernard's Parochial School	Oil	200
Turner Inn	Oil	150
Laconia:		
Harriman Block	Oil	100
Laconia Gas & Electric Co.	Oil	4,000
Laconia National Bank	Oil	75

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Lakeport:		
Lakeport National Bank	Oil	75
Mount Belknap Hotel	Oil	100
Lake Sunapee—W. F. Mortan	Oil	150
Lebanon—Carter & Churchill Co.	Oil	500
Lebanon—Carter, H. W. & Sons	Oil	100
Lisbon—Lisbon Mfg. Co.	Oil	1,500
Littleton—Littleton Power Co.	Oil	1,500
Littleton—Kendrick & Davis Co.	Oil	500
Manchester:		
Amoskeago Mfg. Co.	Oil	75,000
Public Service Co., Elec. 25,000	Oil	25,000
Sihulkau Shoe Co.	Oil	150
Meridith:		
Utilities Power Co.	Elec.	2,000
Merrimack—Stockley, F. A.	Elec.	500
Milford—Sowhegan Valley Elec. Co.	Elec.	1,500
Nashua:		
Asbestos Wood & Shingle Co.	Oil	200
Dunlop Block	Oil	150
[fol. 919]		
Nashua Manufacturing Co.	Oil	25,000
Oakland Pontiac Bldg.	Oil	100
Snow White Laundry	Oil	600
Goodrich Falls Elec. Co.	Oil	1,000
Newport—Newport Elec. Light Co.	Elec.	1,000
Portsmouth—New Hampshire Gas & Elec. Co., Elec. 25,000	Oil	25,000
Rochester—Fownes Mfg. Co.	Elec.	2,000
Tilton—Ideal Mfg. Co.	Oil	100
Warren—Mica Crystal Co.	Elec.	50
Warren—Water & Lighting Co.	Elec.	1,000
Wolfebora—Wolfebora Fire Precinct	Oil	450
New Jersey:		
Allwood:		
Osborne Co.	Oil	2,000
Alpha—Vulcan Silk Co.	Oil	200
Atlantic Highlands—County Gas Co.	Oil	4,500
Bayonne:		
E. Jersey R. R. & Terminal Co.	Oil	3,700
Electric Dynamic Co.	Oil	900
Huber, J., Inc.	Oil	600
Bayonne—Ingram Richardson Corp.	Oil	350
International Nickel Co.	Oil	100
Ogden, J. E.	Oil	350
Belleville—Harlow & Goodman Co.	Oil	1,500
Bloomfield—Eastern Love & Mfg. Co.	Oil	700
Bloomfield:		
General Electric Works	Oil	17,900
Lehn & Fink Co.	Oil	4,400
Nevins Church Press	Oil	900
Peerless Tube Co.	Oil	1,200
Wiggins, H. B., Sons Co.	Oil	1,200
Boonton:		
Van Raelte Silk Co.	Oil	600
Bound Brook—Causse Mfg. & Importing Co.	Oil	300
Bound Brook—Cooke, E. L. & Co.	Oil	500
Bound Brook—Fischer-Sweeney Bronze Co.	Oil	250

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Bridgeton:		
Bridgeton Water Works	Elec.	150
Butler—Butler Munic. Elec. St. Plant	Oil	100
Camden:		
Southwark Mfg. Co.	Oil	1,200
Sturtevant Mfg. Co., B. F.	Oil	300
Carteret:		
Amer. Agricultural Chem. Co.	Oil	4,500
Metal & Thermmt Corp.	Oil	12,000
Moore & Co., Inc.	Oil	250
Warner Chemical Co.	Oil	12,000
Clinton	Oil	4,000
Eureka Printing Co.	Oil	4,000
Dunnellen—Art Color Printing Co.	Oil	900
E. Patterson—Nat'l. Silk Dyeing Co.	Oil	25,000
Edgewater—Barrett Co.	Oil	22,000
Edgewater—National Sugar Co.	Oil	50,000
[fol. 920]		
Edgewater—Spencer Kellogg & Sons	Oil	22,000
Edison—Edison Cement Co.	Elec.	50,000
Elizabeth—Elizabethtown Consol. Gas Co.	Oil	43,000
Elizabeth—Nat'l. Elec. Products Co.	Oil	22,000
Fairview—Bellman Brook Bleachery	Oil	500
Farmingdale—A. C. Soper & Co.	Oil	178,500
Flemington—New Jersey Northern Gas Works	Oil	500
Garfield—Hammersey Mfg. Co.	Oil	1,000
Garwood—Aeolian Co.	Oil	5,300
Garwood:		
Thatcher Foundry Co.	Oil	1,800
Wailes-Dove-Herminston Corp.	Oil	1,800
U. S. Aluminum Co.	Oil	2,400
Grasselli:		
American Cyanamid Co.	Oil	17,800
General Aniline Co.	Oil	21,000
Grasselli Chemical Co.	Oil	9,000
Structural Gypsum Co.	Oil	5,500
Warner-Quinlan Co.	Oil	6,500
Hackensack—Berger Products Co.	Oil	700
Hackensack—Cito Chemical Co. of America	Oil	3,000
Harrison—Edison Lamp Works	Oil	2,000
Hawthorne—Textile Dyeing Co, of America	Oil	24,000
Jamesburg—N. J. State Home for Boys	Oil	178,500
Jersey City:		
Air Reduction S. Co.	Oil	500
American Can Co.	Oil	3,000
Armour & Co.	Oil	300
Boyle, J. F. & Co.	Oil	9,000
Brunswick Laundry	Oil	1,200
Erie R. R.	Oil	800
Gandier, J. H. Co.	Oil	50
General Baking Co.	Oil	1,800
Gillespie Varnish Co.	Oil	250
Greater Corrugated Paper Co.	Oil	1,200
Inter-Folding Box Co.	Oil	250
Koven, L. O. & Bro., Inc.	Oil	1,200
Lehigh Valley R. R.	Oil	700
Lorillard, P. & Co.	Oil	1,500
Merrill Spinning Co.	Oil	350

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Mueaney Iron Works, F. J.	Oil	600
National Products Refg. Co.	Oil	1,500
New Jersey & N. Y. R. R.	Oil	10
N. Y. S. & W. R. R.	Oil	30
North Hudson Grocery Co.	Oil	100
Reimer, Robt., Inc.	Oil	150
Ryerson, J. T. Co.	Oil	500
Standard Laundry	Oil	250
Whitlock Cordage Co.	Oil	4,000
Kearney—Puolfr Serv. Corp.	Oil	700,000
Kearney—Carborundum Co.	Oil	6,000
Keyport—Calco Chemical Co.	Oil	700
Lincoln—C. A. Leetch Mfg. Co.	Oil	250
Lirden—Commercial Steel Equipment Co.	Oil	119,000
[fol. 921]		
Lirden—John Norman Carpet Co.	Oil	178,500
Little Falls—Passaic Consol. Water Co.	Oil	30,500
Lodi—Gregg Co.	Oil	1,500
Lodi—United Piece Dye Works	Oil	900
Morristown—Electrical Alloy Co.	Oil	250
Mountain View—Enterprise Brick Works	Oil	600
Mountain View—Mountain View Brick Works	Oil	300
Maywood—Citro Chemical Co.	Oil	500
Millington—Asbestos, Ltd.	Oil	700
Newark—American Can Co.	Oil	700
Newark:		
American Oil & Supply Co.	Oil	700
Arglo-American Varnish Co.	Oil	1,750
J. L. Armitage & Co.	Oil	1,500
Ballantine, P. & Sons	Oil	1,450
Bamberger, L. & Co.	Oil	2,500
Blanchard Bros.	Oil	8,000
Burroughs Co.	Oil	600
Chien, J. & Co.	Oil	300
Clark Thread Co.	Oil	25,000
Claudius Ash & Co.	Oil	350
Devoe & Reynolds Co., Inc.	Oil	700
Drivet Harris Co.	Oil	3,500
Eagle Picher Lead Co.	Oil	3,000
Eastern Steel Castings Co.	Oil	700
Essex Varnish	Oil	700
Gattfried Krueger Brewing Co.	Oil	50
Geneese Baking Co.	Oil	1,400
Gross & Co., A.	Oil	700
Harell Mfg. Co.	Oil	300
Hertz, Max Leather Co.	Oil	900
Hess & Drucker, Inc.	Oil	2,000
Irvington Varnish & Insulator Co.	Oil	200
Kraewter & Co.	Oil	200
Lincoln Farm Products Co.	Oil	1,000
Murphy Varnish Co.	Oil	3,000
National Fork Washer Co.	Oil	1,200
Pyrere Mfg. Co.	Oil	1,200
Republic Varnish Co.	Oil	700
Sherwin-Williams Co.	Oil	700
Simons Pipe Berding Works	Oil	350
Sweet Foundry Co., Wm. J.	Oil	600
Universal Tobacco Mach. Co.	Oil	100
A. C. Waterman Co.	Oil	900
Woburn-Degressing Co.	Oil	3,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
New Brunswick:		
American Incubator Co.	Oil	300
Armstrong Cork Co.	Oil	1,200
Autozyline Chemical Co.	Oil	150
Cadgene Piece Dye Works	Oil	350
Gulhenkain Seamless Rug Co.	Oil	300
Johnson & Johnson	Oil	6,000
Webb Wire Works	Oil	500
Nutley—Westinghouse Lamp Co.	Oil	3,000
[fol. 922]		
Perth Amboy—Federal Seaboard Terra Cotta Co.	Oil	3,000
Perth Amboy—Fords Porcelain Works	Oil	12,000
Perth Amboy—Pardoe Works, C.	Oil	1,750
Perth Amboy—Rossman Coys.	Oil	1,500
Patterson:		
Empire Piece Dyeing Co.	Oil	5,000
Expert Dyeing Co.	Oil	2,000
Hessler Laundry	Oil	3,000
Lyons Piece Dye Works	Oil	10,000
Nichelson File Co.	Oil	500
Paterson-United Piece Dye Works	Oil	25,000
Weidman Silk Dyeing Co.	Oil	71,400
Wright Aeronautical Corp.	Oil	7,000
Passaic:		
Botany Worsted Mills	Oil	25,000
McLean, Andrew Co.	Oil	500
Manhattan Print Works	Oil	1,500
Midwest Pipe Co.	Oil	500
Minwax Co.	Oil	100
Okonite Co.	Oil	15,000
Union Bldg. & Const. Co.	Oil	600
Rahway:		
Nat'l. Pneumatic Co., Inc.	Oil	700
Royal Mfg. Co.	Oil	200
Uniform Chemical Products, Inc.	Oil	250
Red Bank—Monmouth Consolidated Water Co.	Oil	50
Ridgefield—Denson Corrugated Paper Co.	Oil	1,750
Rutherford—Flintkote Co., Inc.	Oil	12,000
Rutherford—McCullough Wm. & Co.	Oil	3,000
Secaucus—Harson County Mental Disease Hospital	Oil	1,750
South River—American Enameled Brick & File Co.	Oil	1,200
South River:		
Nat'l. Fireproofing Co.	Oil	1,750
N. Y. & N. J. Clay Products Co.	Oil	1,200
South River Brick Co.	Oil	1,200
Summit—Enterprise Laundry	Oil	300
Trenton—Federated Metals Corp.	Oil	3,000
Trenton—G. B. Hill & Co.	Oil	4,000
Trenton—Imperial Porcelain Co.	Oil	1,450
Trenton—Lennox Co.	Oil	3,000
Trenton—Trenton Potteries	Oil	21,400
Vineland—Vineland Flint Glass Co.	Oil	800
Westfield—Van Doren Laundry Service	Oil	175
Vulcan Asbestos Mfg. Co.	Oil	600

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
New York:		
Albany:		
Albany Felt Co.	Oil	1,500
B. T. Babbitt, Inc.	Oil	2,000
A. P. W. Paper Co.	Oil	700
Simmons Machine Coal Corp.	Oil	350
Amsterdam:		
Ritter Chemical Co.	Oil	700
Auburn:		
Bowen Products Co.	Elec.	15,500
[fol. 923]		
Auburn:		
Columbia Rope Co.	Elec.	9,000
Henry & Allen	Elec.	4,000
Henry Forge & Coal Co., Inc.	Oil	3,000
McIntosh Seymore Co.	Elec.	10,000
Richard Eccles Co.	Oil	1,800
Batavia:		
Climax Corp.	Oil	4,700
Doehler Die Casting Co.	Oil	1,500
Massey-Harris-Harvester Co.		5,000
Bath:		
Bath Water Works Co.	Oil	700
Bay Shore—Bay Shore Hospital	Oil	350
Briarcliff Manor—Briarcliff Laundry	Oil	350
Brooklyn:		
Aaron Levy Co.	Oil	1,000
Amer. Mfg. Co.	Oil	1,500
Askell Safety Bay Co.	Oil	1,500
Atlantic Tidewater Team	Oil	12,000
Bishoff, Inc.	Oil	150
Brooklyn Fire Brick Work	Oil	2,500
Brooklyn Shield & Rubber Co.	Oil	150
Chamber of Commerce Bldg.	Oil	300
Chelsea Fibre Mills	Oil	1,500
Doehler Die Casting Co.	Oil	600
Doran Maraghrise Bronze Co.	Oil	150
Fertel Baz Co., Dan W.	Oil	600
Gair Realty Corp.	Oil	12,000
Greenpoint Terminal Co.	Oil	1,500
Griffin Mfg. Co.	Oil	1,000
Hilo Varnish Co.	Oil	175
Hudson Brass Works	Oil	150
Humboldt Dye Works	Oil	50
Ingersoll, Oliver M.	Oil	100
Lane, C. M. Lifeboat Co.	Oil	50
Leibmann Brew. Co.	Oil	24,000
Leviton Mfg. Co.	Oil	150
Maltine Mfg. Co.	Oil	350
Moller & Schumann Co.	Oil	600
Murison Label Carton Co.	Oil	1,000
Phoenix-Hermetic Co.	Oil	1,200
Roberts Numbering Mach. Co.	Oil	50
Sapolin Co.	Oil	700
Sheldon Foster Co.	Oil	2,000
S. S. Laundry Co.	Oil	2,000
United Refrigerator Co.	Oil	300
Victory Towel Sup. Co.	Oil	500
York Ice Machinery Corp.	Oil	100

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Bronx:		
Great Atlantic & Pacific Tea Co.	Oil	100
Buchanan—Standard Textile Products Co.	Oil	22,000
Buffalo:		
Atlas Steel Casting Co.	Oil	1,500
Barcale Mfg. Co.	Oil	500
King Sewing Machine Co.	Oil	1,000
[fol. 924]		
National Anilire & Chemical Co.	Oil	2,500
Pierce Arrow Motor Car Co.	Oil	6,500
Pratt & Letchworth	Oil	500
Rogers Brown Iron Co.	Oil	1,000
Strong Steel Foundry Co.	Oil	1,000
U. S. Aluminum Casting Co.	Oil	1,500
Camillers Cutlery Co.	Oil	1,400
Corning Glass Works	Oil	28,500
Cortland County Fraction Co.	Oil	15,000
Dansville:		
Blum Shoe Co.	Elec.	4,000
Jackson Health Resort	Elec.	2,400
Owen Publishing Co.	Elec.	9,500
Power Specialty Co.	Oil	500
Depew:		
Gould Coupler Co.	Oil	2,500
Endicott:		
Endicott Forgery & Mfg. Co.	Oil	6,000
Union Forging Co.	Oil	750
Elmira Heights—Amer. Bridge Co.	Oil	6,000
Elmira:		
Elmira Foundry Co.	Oil	500
Eclipse Machine Co.	Oil	5,000
Kennedy Valve Mfg. Co.	Elec.	4,000
Willys Morrow Co.	Oil	750
E. Hampton:		
Long Island Ice & Coal Corp.	Oil	250
Westerhoff Hotel	Oil	125
Farmingdale—Industructo Glass Corp.	Oil	200
Farmington—Meadowbrook Hosp.	Oil	1,500
Fulton—Victoria Paper Mills Co.	Oil	3,000
Garden City—Doubleday Page & Co.	Oil	1,750
Geneva—Empire Gas & Elec. Co.	Natural Gas	175,000
Geneva—Patent Cereals Co.	Elec.	7,700
Glen Cove—Knickerbocker Ice Co.	Oil	550
Great Neck—Citizens Water Supply Co.	Oil	700
Greenport—Town of Greenport Water Co.	Oil	1,200
Greenport—Sage Brick Co.	Oil	600
Huntington—New York Water Co.	Oil	2,400
Hornell—Merrill Silk Co.	Elec.	4,500
Herkimer—Herkimer Fibre Co.	Oil	3,000
Haverstraw—West Shore Gbs. Co.	Oil	450
Haverstraw—Kay Laboratories	Oil	1,450
Ilion—Remington Co.	Oil	3,000
Islys—Islys Sanatary Laundry	Oil	1,500
Ithaca—Morse Chair Co.	Oil	3,500
Jamaica—Merkel Inc.	Oil	2,000
Jamaica—Park Laundry Co.	Oil	2,500
Jamaica—Queens General Hospital	Oil	20,000
Johnson City—Endicott Johnson Co.	Elec.	70,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Johnson City—The Felters Co.	Elec.	15,000
LeRoy—Lapps Insulator Co.	Oil	9,700
LeRoy—Rozerson Cold Storage	Elec.	1,800
Lockport—Harrison Radiator Corp.	Oil	5,000
[fol. 925]		
Lockport—Western Block Co.	Oil	500
Long Beach—Long Beach Laundry	Oil	300
Long Island City:		
Atlantic Macoroni Co.	Oil	1,500
Proctor & Gamble Co.	Oil	180,000
Smith, Edw. & Co.	Oil	500
Long Lake—New York State Elec. & Gas Co.	Oil	400
Manhattan:		
Ansonia Hotel	Oil	350
Bowling Green Bldg.	Oil	1,200
Columbia University	Oil	1,750
Equitable Life Ins. Co. Bldg.	Oil	875
Equitable Office Bldg.	Oil	3,000
Imperial Hotel	Oil	500
Macy, R. H. & Co.	Oil	1,200
Metropolitan Life Ins. Bldg.	Oil	3,000
Mt. Sinai Hospital	Oil	250
National Biscuit Co.	Oil	3,000
N. Y. Edison Co.	Elec.	500,000
New York Times Bldg.	Oil	700
Runkell Bros., Inc.	Oil	300
St. Luke's Hospital	Oil	200
Singer Bldg.	Oil	175
United Dressed Beef Co.	Oil	4,000
Wilson & Co.	Oil	3,000
Vanderbilt Hotel	Oil	600
Central Paper Box Co.	Oil	700
Mineola—Knickerbocker Ice Co.	Oil	250
Montauk—Montauk Manor	Oil	300
Monticello—Monticello Water Works	Oil	700
Mt. Vernon:		
Mt. Vernon General Optical Co.	Oil	9,000
No. Amer. Dye Corp.	Oil	3,000
Royal Cleaners & Dyers Co.	Oil	1,750
Willow Brook Dairy Co.	Oil	3,000
Mumford—Mumford Paper Mills	Elec.	3,800
New York City—(Queens):		
Allied Die Casting Corp.	Oil	175
B. Altman & Co.	Oil	5,000
Andrews Lead Co.	Oil	150
Anheuser-Busch Ice Cream Co.	Oil	250
Bohacks, H. G. & Co.	Oil	1,200
Bradley, Wm. & Son	Oil	700
Breyer Ice Cream Co.	Oil	350
Dictograph Products Co.	Oil	175
E. R. Durkee & Co.	Oil	1,450
Four Hundred Madison Ave.	Oil	Undetermined
Thos. Gregory	Oil	150
Hotel New Yorker	Oil	16,000
A. C. Horn & Co.	Oil	250
Lárger, Ed. Printing Co.	Oil	700
Le Blood-Schacht Trunk Co.	Oil	100

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
[fol. 926]		
LeBlord-Schacht Trunk Co.	Oil	100
Leowers-Gambrimus Brew. Co.	Oil	3,600
Merit Hosiery Co.	Oil	175
National Bridge Works	Oil	700
N. Y. Edison Co.	Elec.	500,000
Nichols Copper Co.	Oil	17,800
Paramet Chemical Corp.	Oil	175
Patterson-Sargent Co.	Oil	350
Peerless Glass Co.	Oil	250
Peil Bros. Brew. Co.	Oil	3,000
Pittsburgh Plate Glass Co.	Oil	175
Steel & Tubes, Inc.	Oil	300
Trazeser, John	Oil	600
West Disinfecting Co.	Oil	700
White Co.	Oil	600
Whitestone Dye Works	Oil	700
Newark—Bloomer Bros. Co.	Oil	4,000
Northport—Long Island Lighting Co.	Oil	49,000
Northport—Northport Water Works	Oil	700
No. Towanda—Buffalo Bolt Co.	Oil	4,500
Olean—Acme Glass Co.	Oil	8,000
Oneida—National Casket Co.	Elec.	Undetermined
Oswego—Universal Pressing Machine Co.	Oil	300
Ozone Park—Columbia Wax Works	Oil	2,000
Painted Post—Ingersoll Rand Co.	Oil	15,000
Patchogue—Knickerbocker Ice Co.	Oil	350
Pearl River—Dexter Folder Co.	Oil	2,100
Peekskill—Westchester Lighting Co.	Oil	1,600
Pelham—Knickerbocker Ice Co.	Oil	3,000
Perry—Robinson Cutlery Co.	Elec.	1,200
Port Chester—Russell, Burdsall & Ward Bolt & Nut Co.	Oil	6,000
Rensselaer—F. C. Huyck & Son	Oil	3,000
Richmond—American Dork Co.	Oil	350
Richmond:		
Murals Co., Inc.	Oil	350
Proctor & Gamble Co.	Oil	125,000
Rubsain & Hermans	Oil	.....
U. S. Gypsum Co.	Oil	25,000
Rochester—General Ry. Signal Co.	Oil	2,000
Rochester—F. H. Symington Co.	Oil	500
Rockville Center—Village of Rockville Center	Oil	1,450
Rome—Northern New York Utilities	Oil	500
Rome—Rome Brass & Copper Co.	Oil	6,500
Rome—Rome Turney Radiator Co.	Oil	175
Rome Wire Co.	Oil	350
Roseton—Jova Brick Works	Oil	3,000
Roseton—Roseton Brick Corp.	Oil	1,750
Salamanca—Union Tanning Co.	Elec.	500
Saranac Lake	Oil	350
Shortsville—Paper Machine Co.	Elec.	3,000
Sodus—Grasselli Chemical Co.	Oil	350
Southampton—Edwards Laundry	Oil	100
Southampton Ice Co.	Oil	300
[fol. 927]		
Southampton—Southampton Hospital	Oil	500
So. Bethlehem—Callaham Road Improvement Co.	Oil	1,450

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Spring Valley—S. A. Stevens & Son	Oil	250
Syracuse—Holcomb Steel Co.	Oil	21,000
Syracuse:		
Onondaza Silk Co.	Oil	350
Prosperity Co.	Oil	700
Syracuse San-Equip, Inc.	Oil	600
Syracuse Lighting Co.	Oil	6,200
Tarrytown—Chevrolet Motor Co.	Oil	21,000
Utica—Masonic Home	Oil	6,500
Utica—Richardson & Boynton	Oil	1,400
Victor—Victor Flour Mills	Oil	500
Watertown—Northern New York Utilities Corp.	Oil	50
Wellsville—Sinclair Refining Co.	Natural Gas	45,000
North Carolina:		
Ashville—Carolina Power & Light Co.	Elec.	20,000
Burnsville—Northwestern Carolina Utilities	Oil	1,200
Caroleen—Henrietta Mills	Elec.	10,000
Charlotte—Highland Park Mfg. Co.	Elec.	12,000
Charlotte—Southern Public Utilities Co.	Oil	3,200
Cramerton—Cramerton Mills	Elec.	15,000
Durham:		
Durham Hosiery Mills	Elec.	10,000
Imperial Tobacco Co.	Oil	3,100
Watts Hospital	Oil	3,000
Edenton—Edenton Cotton Mills	Elec.	6,000
Elizabeth City—Foreman Blades Co.	Oil	1,000
Greensboro—North Carolina Pub. Service Co.	Oil	1,600
Greystone—Raleigh Granite Co.	Elec.	500
Hickery—Piedmont Utility Co.	Oil	200
Kannapapolis—Cannon Mills	Elec.	45,000
Lincolnton—Lincoln Milling Co.	Elec.	500
Louisburg Light & Water Co.	Oil	360
Monroe—Henderson Roller Mill Co.	Elec.	500
Oxford—Oxford Cotton Mills	Elec.	1,000
Red Springs—Red Springs Light Plant	Oil	600
Sanford—Southern Milling Co.	Oil	120
Statesville—Nat'l. Utilities of No. Carolina	Oil	400
Wake Forest—Royal Cotton Mills	Oil	1,200
W. Jefferson—Northwestern Carolina Utilities	Oil	360
Wilmington—Southport Fisheries	Oil	10,000
Winston-Salem—Forsythe Roller Mill Co.	Elec.	1,000
Winston-Salem—North Carolina Pub. Utilities	Oil	200
Winston-Salem—So. Side Roller Mills	Elec.	1,500
Ohio:		
Ashland—Union Malleable Mfg. Co.	Oil	250
Findlay—Nat'l. Refining Co.	Oil	15,000
Forstoria—Seneca Wire & Mfg. Co.	Oil	1,500
Lima—The Solar Refining Co.	Oil	90,000
Merriton—Interstate Tissue Co.	Elec.	6,000
Toledo—Gulf Refining Co.	Oil	30,000
Toledo—Libbey-Owens Ford Plate Glass Co.	Artificial Gas	70,000
Toledo—Surr Oil Co.	Oil	30,000
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Pennsylvania:		
Allentown—Allentown Rapid Service Co.	Elec.	4,000
Ambler—Comm. Paint Co.	Oil	1,000
Auburn—Artistic Knitting Mills	Oil	500

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Auburn—Delaware Seamless Tube Co.	Oil	200
Bridgeport—York Heating & Ventilating Co.	Oil	150
Columbia—Manor Mfg. Co.	Oil	500
Conshohocken—Walker Bros.	Oil	200
Coatesville—Lukens Steel Co.	Oil	40,000
Frankfort—The Barrett Co.	Oil	26,000
Larsdale—A. C. Godshall & Co.	Oil	1,800
Manheim—Hershey Mach. & Fdry. Co.	Oil	1,000
Morristown—McCarter Iron Works	Oil	500
Nazareth—Nazareth Paper Box Co.	Oil	800
Norristown—Ford & Kendig Co.	Oil	3,500
Oaks—Campbell Hosiery Co.	Oil	500
Oaks—Detco Mfg. Co.	Oil	500
Philadelphia:		
Collins & Aikman	Oil	25,000
Cornung Brewery Co.	Oil	2,000
Delaney & Co.	Oil	8,000
Depont Co.	Oil	60,000
Federal Container Co.	Oil	3,000
Felin & Co., John J.	Oil	3,000
Ford & Kendig Co.	Oil	4,000
Gotham Silk Hosiery Co.	Elec.	500
Hess Bright Mfg. Co.	Oil	1,200
Hubschumann, H.	Oil	1,200
Hulton Dyeing Co.	Oil	1,500
Martin, L. Co.	Oil	2,500
Moore & White Co.	Elec.	600
Phila. Storage & Battery Co.	Elec.	2,500
Morganthaler Bros.	Elec.	10,000
Mazer Paper Co.	Oil	5,000
Peter Hernig	Oil	500
Phila. Box & Board (Fibre) Co.	Oil	12,000
Watson, C. B.	Oil	1,000
Phoenixville:		
Phoenix Iron Co.	Oil	60,000
Primos:		
Equipment Corp. of America	Oil	500
Penna. Lawn Mower Co.	Oil	500
Ridgeway:		
Ridgeway Light & Power Co.	Elec.	50,000
Royersford—Diamond Glass Co.	Oil	2,000
Royersford—Royersford Fdry & Machine Co.	Elec.	1,500
Royersford—Royersford Needle Works	Oil	1,000
Titusville—Crew Lewick Co.	Oil	12,000
York—Helb, Theo. R.	Elec.	800
York—York Ice & Milk Co.	Elec.	500
Westfield—Penna.-Eberle Tanning Co.	Natural Gas	8,000
Wird Gap	Elec.	1,500
Rhode Island:		
Albion—Valley Falls Co.	Elec.	5,000
Anthony—Coventry Co.	Elec.	2,500

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Apponaug:		
Appanaug Co.	Oil	15,000
Apponaug Print Works	Oil	500
Narragansett Cotton Mills	Oil	3,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Ashaway:		
Ashaway Line & Twine Co.	Oil	1,000
Ashton—Lonsdale	Elec.	3,000
Auburn—General Fire Ext. Co.	Oil	3,500
Auburn—Universal Wind Machine	Oil	10,000
Berkeley—Berkeley Mills	Elec.	3,500
Bristol—Cransted Worsted Mills	Oil	2,000
Bristol—National India Rubber Co.	Oil	8,000
Centerdale—Centerdale Worsted Mills	Oil	2,000
Central Falls—Weypoyset Mfg. Co.	Oil	2,500
Cranston—Imperial Print & Fin. Co.	Oil	2,500
Darlington—American Elec. Works	Oil	20,000
E. Greenwich—Boston Wire Stitcher Co.	Oil	1,500
E. Greenwich:		
East Greenwich Water Supply Co.	Elec.	700
Greenwich Bleachery Co.	Oil	3,000
Greenwich Mills, Elec. 2,000	Oil	5,000
Providence Drysalters Co.	Oil	1,500
Esmond—Esmond Mills, Inc.	Oil	8,000
Fiskeville—Interlaken Mills	Oil	4,500
Forestdale—Branch River Combing Co.		4,000
Greystone—Benn Corp., Jos.	Oil	10,000
Hillsgrove—Elizabeth Mills	Oil	1,000
Hillsgrove—R. I. Malleable Iron Works		500
Hope—Hope Co.	Oil	4,000
Jamestown—Jamestown & Bristol Ferry Co.	Oil	1,500
Lymansville—Lymansville Co.	Oil	5,000
Manton—Joslin Mfg. Co.	Oil	1,000
Manville—Manville Jenkes Co.	Oil	15,000
Narragansett—Narragansett Elec. St. Co.	Oil	250,000
No. Grosvenondale—Grosvenondale Co.	Oil	10,000
Oakland—Mapleville Mill	Oil	4,000
Olneyville—Crown Worsted Co.	Oil	3,000
Olneyville—R. I. Wool Combing Co.	Oil	2,000
Pawtucket—Acme Finishing Co.	Oil	5,000
Pawtucket:		
Attleboro Braiding Co.	Elec.	500
Blackstone Stocking Co.	Elec.	500
Cadillac Silk Co.	Oil	1,000
Coats, J. & P.	Oil	6,000
Collyer Insulated Wire Co.	Oil	3,000
Comrad Mfg. Co.	Oil	500
Corning Glass Works, Inc.	Oil	1,000
Crosby Co., J. D.	Oil	500
Crown Mfg. Co.	Oil	3,500
Davis-Jones Insulated Wire Co.	Oil	500
Davis Mfg. Co., Frank	Oil	1,000
Draper Co., J. O.	Oil	500
Eureka Dyeing & Bleaching Co.	Oil	1,500
General Cable Co.	Oil	11,500

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Hallowell Co.	Oil	1,000
Hallowell Worsted Mfg. Co.	Oil	1,000
Hope Bedding Co.	Oil	7,000
Ideal Thread Co.	Elec.	500
Loraine Mfg. Co.	Oil	1,000
Lumb Knitting Co.	Oil	1,000
Manville Jenckes Co.	Oil	5,000
Mars Grand Rug Co.	Oil	500

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Moore Fabric Co.	Oil	1,000
New England Machine & Elec. Co.	Elec.	500
Pawtucket Hosiery Co.	Elec.	1,000
Phillips Wire Co.	Oil	500
Potter & Johnson Machine Co.	Oil	700
Potter Fine Spinners, Inc.	Oil	1,000
Pressed Metal Co.	Oil	1,500
Royal Weaving Co.	Oil	500
Carl Schoen Silk Corp.	Oil	500
Shannock Narrow Fabric Co.	Oil	1,000
Union Wadding Co.	Oil	500
U. S. Knitting Co.	Oil	1,500
Very Small Mills	Oil	10,000
Waypoysett Mfg. Co.	Oil	15,000
West End Thread Co.	Oil	1,000
Woodlawn Finishing Co.	Oil	1,500
Peacedale—Peacedale Mills	Oil	5,000
Phenix—Phenix Lace Mills	Elec.	1,500
Phenix—Phenix Mill	Elec.	2,500
Phillipsdale—Amer. Electrical Works	Oil	500
Phillipsdale:		
Glenlyn Finishing Co.	Oil	4,000
Rumford Chemical Works	Oil	3,000
Rumford Textile Co.	Oil	2,000
Sayles Finishing Co.	Oil	15,600
Sunlight Chemical Co.	Oil	1,000
Wasburn Wire Co.	Oil	5,000
Providence:		
Wayland Manor	Oil	700
Waite Thresher Co.	Oil	500
Weybosset Pure Food Market	Oil	250
Wanskuck	Oil	2,000
U. S. Gutta Percha Paint Co.	Oil	3,500
Universal Color Chemical Co.	Oil	500
Universal Winding Co.	Oil	1,000
United Wire & Supply Co.	Elec.	500
United Braid & Lace Co.	Elec.	1,000
Union Wadding Co.	Oil	3,000
Union Hand Laundry	Oil	500
Title Guarantee Bldg.	Oil	300
Turks Head Bldg.	Oil	1,200
Textile Finishing Co.	Oil	1,500
T. W. Foster & Co.	Oil	1,000
Taylor Symonds Co.	Oil	150
Swiss Cleansing Co.	Oil	500

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Studley Bldg.—Providence	Oil	300
Providence:		
Starkweather & Shepley Co.	Oil	200
Sherwood Block	Oil	200
Shepard Co.	Oil	1,500
St. Joseph Hospital	Oil	1,000
St. Peter & Paul Cathedral	Oil	1,500
Sayles Finishing Plants	Oil	75,000
Reynolds Block	Oil	100
Revere Rubber Co.	Oil	40,000
Rhode Island School of Design	Oil	1,500
Rhode Island Catholic Orphan Asylum	Oil	200
Rhode Island Tool Co.	Oil	2,000

PLAINTIFF'S EXHIBIT 34—Continued

	Displaced by	Actual tonnage lost (Tons)
Rhode Island New Co. Bldgs	Oil	150
Rhode Island Insurance Co	Oil	500
Rhode Island Yarn Co	Oil	1,000
Rhode Island Hospital Trust Bldg	Oil	2,000
Providence Lying-in Hospital	Oil	1,000
Providence Public Library Bldg	Oil	300
Providence Public Market Bldg	Oil	300
Providence & Washington Ins. Co	Oil	200
Providence Institution for Svgs	Oil	200
Providence City Schools Dept	Oil	500
Providence Chamber of Commerce	Oil	75
Providence Journal	Oil	500
Providence Combing Co	Oil	1,500
Phenix Bldg	Oil	200
Pilgrim Plush Co	Oil	1,000
Peoples Savings Bank	Oil	150
Paye & Baker Co	Oil	300
Paragon Worsted Co	Oil	1,500
Paramount Theatre	Oil	300
Old Colony Co-op. Bank	Oil	300
Ochee Spring Water Co	Oil	75
Outlet Co	Oil	7,000
Ostby & Barton Co	Oil	1,000
Nicholson File Co	Oil	3,500
N. England Hosiery Co	Elec.	500
N. England Butt Co	Oil	500
Nat'l & Providence Mills	Oil	2,000
Narragansett Milling Co	Oil	1,400
Narragansett Lbr. Co	Oil	75,000
Narragansett Hotel	Oil	1,000
Narragansett Elec. Light Co	Oil	225,000
Morris Plan Co. Bldg	Oil	100
Modern Theatre	Oil	150
Minden Apts	Oil	300
Manufacturers Bldg	Oil	3,000
Majestic Theatre	Oil	300
Mac Rae, F	Oil	200
M. & F. Worsted Mills	Oil	2,500
Lymansville Co	Oil	5,000
London & Co	Oil	500
Leonard-Rootes Co	Elec.	500
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Loew Estate Bldgs	Oil	300
Loews State Theatre	Oil	600
Jno. B. Lewis, Inc	Oil	3,000
Lapham Bldg	Oil	600
Lauderdale Bldgs	Oil	1,000
Kresge Bldg	Oil	200
Koppleman, Jos. E	Oil	5,000
Kinsley Bldg	Oil	300
Kenney Mfg. Co	Oil	1,000
Kelley Ice Cream Co	Elec.	500
Johnson, Oliver & Co	Oil	150
International Braid Co	Oil	1,000
Industrial Trust Bldg	Oil	4,000
Irons & Russell Building	Oil	500
Improved Seamless Wire Co	Oil	300
Imperial Printing & Finishing Co	Elec.	500
Hawarth, Albert	Oil	100
Hope Webbing Co	Oil	6,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Hope Theatre	Oil	150
Hoppin Homestead Bldg	Oil	200
Home for Aged Women	Oil	150
Home for Aged Men & Couples	Oil	300
High Schools	Oil	1,500
Henley, Co., James	Oil	500
Grosvenordale Company	Oil	10,000
Grosvenor Bldg	Oil	1,200
Greene, R. L. Co	Oil	100
Gorham Mfg. Co	Oil	1,500
Glendale Elastic Fabric Co	Oil	500
General Fire Ext. Co	Oil	5,000
General Baking Co	Oil	500
Franklin Process Co	Oil	5,000
Franklin Hotel	Oil	1,000
Fitzgerald Bldg	Oil	150
Fays Theatre	Oil	250
Everett & Barren Co	Oil	500
Elks Bldg	Oil	250
Eagle Mills	Oil	3,000
Dutton Co., M. W	Oil	500
Dorset Woolen Co	Oil	2,500
Doran Bldg	Oil	700
Dolbey Ice Cream Co	Elec.	500
Daval Rubber Co	Elec.	1,500
Crown Worsted Mill	Oil	3,000
Crown Hotel	Oil	2,000
Conrad Bldg	Oil	150
Colonial Knife Co	Oil	500
Coated Textile Co	Oil	2,000
Citizens Savings Bank	Oil	200
City Hall	Oil	300
Churchill House	Oil	100
Cherry & Webb Co	Oil	300
Capitol	Oil	150

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Calvery Baptist Church	Oil	150
Caeser Misch	Oil	200
Cady Moving & Storage Co	Oil	100
Burrill Bldg	Oil	400
Budlong Mfg. Co	Elec.	500
Brownell Mach. Co	Oil	1,000
Brown University	Oil	4,500
Boston Store	Oil	1,500
Bodell Bldg	Oil	200
Biltmore Hotel	Oil	2,000
Beuna Vista Apts	Oil	300
Berkander, Geo. F	Oil	500
Baird-North Co	Oil	200
Amer. Woolen Co	Oil	4,000
Amer. Silk Spinning Co	Oil	3,000
Amer. Screw Co	Oil	2,500
Allen Hotel	Oil	150
Albee Theatre	Oil	400
River Point—Rapperport Finishing Co	Oil	6,000
Rumford—Rumford Chem. Co	Oil	5,000
Stillwater—Centerdale Worsted Mills	Oil	4,500
Slatersville—Branch River Wool Combing Co	Oil	3,000
Saylesville—Springdale Finishing Co	Oil	10,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Saylesville—Saylesville Finishing Plants	Oil	4,500
Valley Falls—Crown Mfg. Co	Oil	1,500
Valley Falls—Hindley Mfg. Co	Oil	250
Valley Falls—Standard Nut & Bolt Co	Oil	2,000
Warren—Consolidated Thread Mills	Elec.	1,500
Warren—Mt. Hope Mills	Elec.	3,500
W. Barrington—Collins & Aikman Corp	Oil	3,000
Westerly—Lorraine Mfg. Co	Oil	5,000
Westerly—New England Silk Mills	Oil	1,500
W. Warwick—Pawtuxet Valley Dyeing Co	Oil	2,500
Woonsocket:		
Amer. Paper Tube Co	Oil	5,000
Branch River Wool Comb Co	Oil	3,500
Crown Piece Dye Works	Oil	1,500
Desurmont Worsted Co	Oil	7,000
Falls Yarn Mill	Oil	1,000
Florence Dye Works	Oil	1,000
French Worsted Mills	Oil	35,000
Guerin Mills	Oil	3,500
Manville Jenckes Co	Oil	10,000
Nyanza Mills	Oil-Elec	2,000–4,000
Philmont Worsted Co	Oil	1,000
River Spinning Co	Oil	1,500
Sydney Worsted Co	Oil	1,500
Taft Pierce Mfg. Co	Oil	3,500
Very Small Mills (Prov.)	Oil	10,000
Woonsocket Brush Co	Elec.	1,000
Woonsocket Dye & Blchy. Co	Oil	1,000
Woonsocket Falls Mills	Oil	7,000
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Woonsocket Mach. & Press Co	Oil	500
Woonsocket Napping Machine Co	Oil	1,000
Woonsocket Spinning Co	Oil	1,000
South Carolina:		
Anderson—Gas & Utility Co	Oil	650
Buffalo—Union Buffalo Mills	Elec.	12,000
Charleston—Southern Ice	Oil	8,000
Charleston—United Fruit Co	Oil	12,000
Clinton—Clinton Cotton Mills	Elec.	10,000
Columbia—So. Cotton Oil Co	Elec.	60,000
Greenville—Southern Public Utilities	Oil	150
Greenville—Woodside Cotton Mill	Elec.	30,000
Hartsville—Hartsville Oil Mill	Elec.	12,000
Lancaster—Lancaster Cotton Mills	Elec.	15,000
Rocky Hill—Rocky Hill Gas Co	Oil	300
South Dakota:		
Belle-Fourche-Utah-Idaho Sugar Co	Natural Gas	15,000
Rapid City—So. Dak. State Cement Plant	Natural Gas	20,000
Sioux Falls—John Morrell & Co	Natural Gas	28,000
Tennessee:		
Memphis:		
Baptist Hospital	Gas	2,500
Chisca Hotel	Gas	5,500
Commercial Chemical Co	Gas	2,500
Gayoso Hotel	Gas	5,500

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Memphis Steam Laundry	Gas	5,500
Memphis Baking Co	Gas	3,000
Oakville Sanatorium	Gas	2,000
Oliver—Finnie Co	Gas	2,500
Peabody Hotel	Gas	9,000
Veteran Hospital	Gas	2,250
West Tenn. State Teachers College	Gas	2,500
Vermont:		
Bristol—Draker Smith & Co	Elec.	500
Bristol—Vermont Box Co	Elec.	1,500
Dauby—Whiting Milk Co	Elec.	1,500
Gilman—Gilman Paper Co	Elec.	20,000
Hydeville—Hydeville Cons. Slate Works	Elec.	2,000
Ludlow—Town of Ludlow	Oil	2,000
Nutland—Clarendon Marble Co	Elec.	1,500
Nutland—Eastman Marble Co	Elec.	1,000
Manchester Marble Co	Elec.	1,000
Poultney—Auld & Conger Co	Elec.	1,000
Poultney—General Slate Co	Elec.	1,500
Poultney—Griffiths Slate Co	Elec.	500
Poultney:		
Manhattan Shirt Co	Elec.	1,350
N. Y. Cons. Slate Co	Elec.	1,000
Owens Slate Co	Elec.	500
United Slate Co	Elec.	500
Williams Machine Co	Elec.	250
St. Johns—Carrie Maple Sugar Co	Wood	3,000
Springfield:		
Bryant Company	Oil	1,000

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Springfield:		
Jones & Lamson Machine Co	Oil	1,000
Lovejoy Tool Co	Oil	500
White River Junction—Grafton Co. Elec. Co	Elec.	1,500
Winooski—Green Mt. Power Co	Oil	3,500
Winooski—Richard Mfg. Co	Oil	500
Virginia:		
Alexandria—Mutual Ice Co	Elec.	600
Berryville—Robinson Ice & Cold Storage Corp	Elec.	600
Eieldvale—Carolina Cotton & Woolen Mills	Elec.	8,000
Harrisonburg—Shenandoah Mfg. Co	Elec.	300
Norfolk—Industries, Towboats, Etc	Oil	100,000
Norfolk—Wood Towing Co	Oil	8,000
Winchester—Robinson Ice & Cold Storage Corp	Elec.	1,500
West Virginia:		
Clarksburg:		
Adamston Flat Glass Co	Nat'l Gas	32,000
Flat Glass Spec. Co	Gas	10,000
Hazel Atlas Glass Co	Nat'l Gas	Undetermined
Pittsburgh Plate Glass Co	Nat'l Gas	40,000
Rolland Glass Co	Nat'l Gas	20,000
Charlestown—Robinson Ice & C. S. Co	Elec.	1,800
Crow Summit—Eureka Stone Co	Gas	350
Fairmont—Fairmont Aluminum Co	Gas	2,000
Fairmont—Monongah Glass Co	Gas	20,000
Hastings—Hope National Gas Co	Gas	60,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Hope—Hope National Gas Co	Nat'l Gas	Undetermined
Hoult—Hope National Gas Co	Gas	10,000
Moorefield—Union Tanning Co	Wood	1,500
Moundsville—U. S. Stamping Co	Gas	12,000
New Martinsville—New Martinsville Glass Mfg.Co.	Nat'l Gas	5,000
Paden City—Paden City Glass Mfg. Co	Gas	30,000
Paden City—Paden City Pottery Co	Gas	1,200
Paden City—Paul Wissmach	Gas	20,000
Parkersburg Iron & Steel Co	Oil & Gas	7,000
Sistersville—Scoby Sheet Glass Co	Gas	18,000
St. Marys—Ohio Valley Refining Co	Gas	10,000

[fol. 936] Supplement No. 1 to

Statement Showing Some Examples of Coal Tonnage Lost to Competing Forms of Fuels or Energy

Arizona, Colorado, New Mexico and Texas:

The Swastika Fuel Company, Raton, New Mexico, estimates 50,000 tons annually lost through retail coal trade account intrusion of gas and low price fuel oil, and 500,000 tons annually of railway fuel tonnage account railroads using fuel oil.

Arizona, Lower California and Mexico:

Coke tonnage lost to natural gas equivalent to 450,000 tons of coal annually.

	Displaced by	Actual Tonnage lost (Tons)
Colorado:		
Fort Lyon—Veterans Bureau Hospital	Natural Gas	9,000
La Junta—Mennonite Sanatorium	Natural Gas	500
La Junta—Santa Fe Railway Power Plant	Natural Gas	25,000
Lamar—Municipal Power Plant	Natural Gas	4,500
Rocky Ford—American Beet Sugar Co	Natural Gas	15,000
Kentucky:		
Louisville—Grocers Ice Company	Hydro-Elec.	7,800
Louisville—Louisville Water Company	Hydro-Elec.	18,000
Louisville—Merchants Ice & Cold Stor. Co	Hydro-Elec.	26,000
Newport—Andrews Steel Company	Natural Gas	22,500
	Oil	2,500
New Jersey:		
Camden—Camden County Institutions	Oil	11,000
New Mexico:		
Albuquerque—Electric Plant	Natural Gas	3,000
Clovis—Electric Power Plant	Natural Gas	6,000
Clovis—Railways Ice Company	Natural Gas	2,500
Deming—Deming Ice & Electric Co	Natural Gas	7,500
Rosewell—Rosewell Gas & Electric Company	Natural Gas	6,000
Rosewell—New Mexico Military Institute	Natural Gas	6,000
Santa Fe—Electric & Power Plant	Natural Gas	6,000
Tucumcari—Power Plant	Fuel Oil	6,000
Numerous small plants	Natural Gas	1,000
New York:		
Binghamton—Associated Gas & Elec. Co.	Natural Gas	50,000/60,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Texas:		
Amarillo—Light, Power & Street Rwy. Co.	Natural Gas	10,000
Dalhart—Dalhart Ice & Elec. Co.	Fuel Oil	6,000
El Paso—Beaumont Hospital (U. S. Army)	Natural Gas	2,500
El Paso—El Paso Brick Company International Brick Company Consumers Ice Company El Paso Ice & Refrigerator Co	Nat. Gas & Oil	10,000
Numerous cotton gins and oil mills in, West Texas	Nat. Gas & Oil	5,000
El Paso—Southwestern Portland Cement Co	Natural Gas	50,000
Fort Bliss—U. S. Army Post	Natural Gas	6,000
Plainview, Lubbock & Canyon—Elec. Plants	Natural Gas	5,000
[fol. 937]		
Fort Dodge—Certainteed Products Co.	Natural Gas	10,000
Fort Dodge—Northwestern Mfg. Co.	Natural Gas	16,500
Fort Dodge—U. S. Gypsum Company	Natural Gas	40,000
Fort Dodge—Universal Gypsum & Lime Co	Natural Gas	10,000
Fort Dodge—Wasson Plaster Company	Natural Gas	3,000
Mason City—Hanford Hotel	Natural Gas	1,250
Mason City—Jacob E. Docker & Sons	Natural Gas	18,000
Mason City—Lehigh Portland Cement Co.	Natural Gas	112,000
Mason City—Mason City Brick & Tile Co.	Natural Gas	65,000
Mason City—N. W. States Port. Cement Co	Natural Gas	160,000
Mason City—Peoples Gas & Electric Co	Natural Gas	35,000
Muscatine—H. J. Heinz Company	Natural Gas	7,000
Muscatine—Iowa Electric Company	Natural Gas	2,100
Muscatine—Public Schools	Natural Gas	2,100
Red Oak—Iowa Nebraska Light & Power Co	Natural Gas	2,000
Red Oak—Small Municipal Plants	Oil	15,000
Shenandoah—Iowa Nebraska Light & Power Co	Natural Gas	2,000
Sioux City—Armour & Company	Natural Gas	35,500
Sioux City—Cudahy Packing Company	Natural Gas	28,000
Sioux City—Hanford Produce Company	Natural Gas	14,000
Sioux City—Sioux City Brick & Tile Co.	Natural Gas	2,000
Sioux City—Sioux City Gas & Electric Co.	Natural Gas	82,000
Sioux City—Swift & Company	Natural Gas	22,500
Kentucky:		
Danville—Anderson & Spillman	Hydro-Elect.	600
Maryland:		
Baltimore—Davis Paint Company	Oil	600
Baltimore—National Enameling & Stamping Co	Oil	Undetermined
Baltimore—A. Gross Candle Co.	Oil	Undetermined
Baltimore—U. S. Industrial Alcohol Company	Oil	100,000
Michigan:		
Monroe—Amendt Milling Company	Oil	2,500

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Mississippi:		
Bay Saint Louis—Bay Saint Louis Ice & Bottling Works	Electric	1,000
Brookhaven—Brookhaven Pressed Brick & Mfg. Co	Natural Gas	4,000
Clarksdale—Planters Manufacturing Co.	Natural Gas	7,500
Greenville—International Vegetable Oil Co	Natural Gas	3,500
Port Gibson—Port Gibson Oil Works	Elec. Gen. by Natural Gas	6,000
Starkville—Mississippi A. & M. College.	Natural Gas	8,200
Starkville—J. W. Sanders Cotton Mills	Natural Gas	2,250
Missouri:		
St. Joseph—U. S. Gypsum Co	Natural Gas	Undetermined
St. Joseph—Jersey Cereal Company	Natural Gas	Undetermined
New Jersey:		
Bayway—Standard Oil Co. of New Jersey	Oil	100,000
Hillside—Bristol Myers Co	Oil	4,000
Jersey City—Cudahy Packing Company	Oil	4,200
Manville—Johns Manville Company	Oil	40,000
Newark—Clark Thread Company	Oil	5,000
New Brunswick—Carrier Engineering Corporation	Oil	1,000

[fol. 938]

New York:		
Bass—Bass Electric Company	Natural Gas	4,000
Binghamton—Associated Gas & Electric Co	Natural Gas	50,000/60,000
Endicott—Endicott Johnson Company	Oil	2,000
Geneva—Associated Gas & Electric Company	Natural Gas	120,000
Johnson City—Associated Gas & Electric Co	Natural Gas	180,000
Syracuse—Niagara Hudson Company	Natural Gas	90,000
Syracuse—Semet Solvay Company	Natural Gas	285,000
Troy—Burden Iron Company	Oil	5,000
Wellville—St. Clair Refining Company	Natural Gas	50,000
Whitestone—Long Island, Kent Stores, Inc	Oil	1,000
Ohio:		
Bainbridge—Bainbridge Light & Power Company	Oil	1,400
Charden—General Electric Company	Natural Gas	15,000
Niles—General Electric Company	Natural Gas	12,000
Oklahoma:		
Harrah—Oklahoma Gas & Electric Co	Oil & Nat. Gas	45,000
Pennsylvania:		
Austin—Bayless Pulp & Paper Co	Natural Gas	10,000
Galeton—City of Galeton		1,250
Elkland—Elkland Leather Co	Natural Gas	3,500
Genessee—Genessee Chemical Co	Natural Gas	3,000
Philadelphia—Allman Nurseries	Oil	200
Philadelphia—A. Theodore Abbot	Electric	2,000

PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Philadelphia—Yale & Towne Mfg. Co...	Electric	2,000
Westfield—Eberle Tanning Co.....	Natural Gas	5,000
Westfield—Renken Dairy Co.....	Natural Gas	1,000
Rhode Island:		
Bradford—Bradford Dyeing Association.	Oil	7,500
South Carolina:		
Greenville—Brandon Corporation.....	Electric	15,000/18,000
Pelzer—Pelzer Manufacturing Co.....	Electric	18,000
Electrification of the Pennsylvania Railroad		Undetermined

[fol. 939] Supplement No. 2 to

Statement Showing Some Examples of Coal Tonnage Lost to Competing Forms of Fuels or Energy

(Very recent displacements)

State and City	Displaced by	Actual tonnage lost (tons)
Alabama:		
Mobile—Mobile Paper Mill.....	Hydro-Elec.	6,000
Tuskegee—U. S. Veterans Facility.....	Natural Gas	6,500
Connecticut:		
Hartford—Hartford Electric Light Co...	Oil	125,000
Delaware:		
Wilmington—National Vulcanized Fiber Co.....	Oil	12,000
Georgia:		
Atlanta—Federal Penitentiary.....	Natural Gas	16,000
Columbus—Fort Benning.....	Natural Gas	6,000
Columbus—Muscogee Mfg. Co.....	Natural Gas	6,000
Savannah—Merchants & Miners Trans. Co. (bunkers).....	Oil	Several thousand
Illlinois:		
Chicago—Republic Steel Co.....	Natural Gas	31,000
Chicago—Mongtomery Ward & Company	Oil	5,500
Chicago—Swift & Company.....	Natural Gas	200,000
East St. Louis—Aluminum Ore Company	Natural Gas	110,000
Kankakee—Bear Brand Hosiery Co.....		15,000
Ottawa—Chicago Retort & Fire Brick Co.	Natural Gas	5,000/10,000
Ottawa—Libbey Owens Ford Company.	Natural Gas	70,000
Marseilles—Certainteed Products Co....	Natural Gas	25,000
Chicago Heights—Columbia Tool Steel Co.....	Natural Gas	2,000
Ottawa—Federal Plate Glass Co.....	Natural Gas	100,000
Streator—Owens Illinois Glass Co.....	Natural Gas	75,000
Iowa:		
Atlantic—Iowa Electric Company.....	Natural Gas	1,500
Britt—Central States Electric Co.....	Natural Gas	1,200
Cedar Rapids—Montrose Hotel.....	Natural Gas	15,000
Cedar Rapids—Penick & Ford.....	Natural Gas	120,000

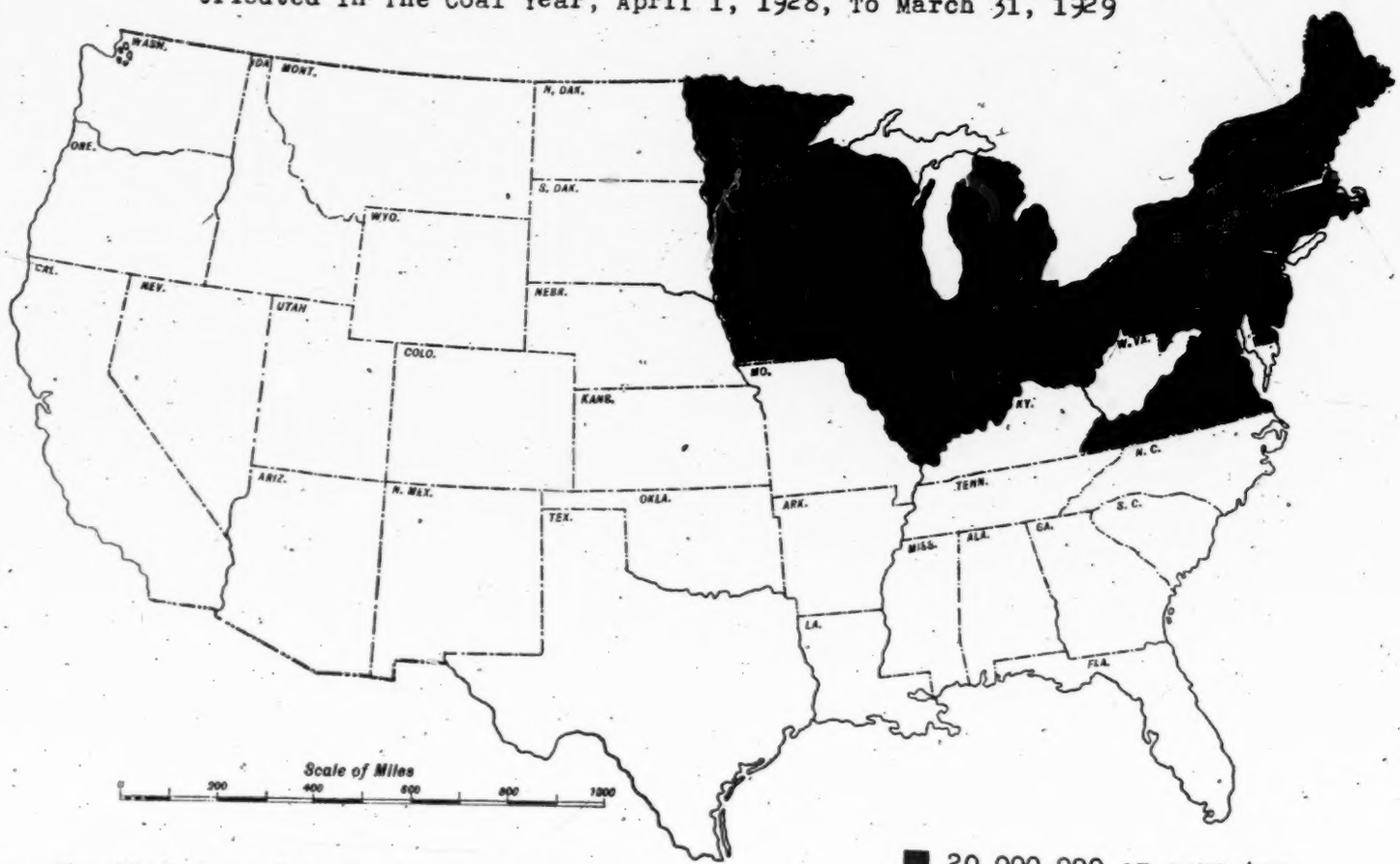
PLAINTIFF'S EXHIBIT 32—Continued

	Displaced by	Actual tonnage lost (Tons)
Cedar Rapids—Sinclair Packing Co.....	Natural Gas	30,000
Cedar Rapids—T. M. Sinclair, Ltd.....	Natural Gas	60,000
Cedar Rapids—Three Minute Cereal Co.	Natural Gas	10,000
Council Bluffs—Council Bluffs Gas Co...	Natural Gas	4,000
Council Bluffs—Jenny Edmiston Hospital.....	Natural Gas	3,200
Council Bluffs—Iowa School for the Deaf.	Natural Gas	3,600
Council Bluffs—Lainson, Florist.....	Natural Gas	3,750
Council Bluffs—Sisters of Mercy.....	Natural Gas	1,500
Council Bluffs—J. F. Wilcox & Son.....	Natural Gas	9,000
Davenport—American Service Company.	Natural Gas	3,500
Davenport—Dewey Portland Cement Company.....	Natural Gas	150,000
Davenport—Kohrs Packing Company...	Natural Gas	5,000
Davenport—Western Flour Mills Co....	Natural Gas	5,000
Davenport—United Light & Ry. Co.....	Natural Gas	200,000
Des Moines—Des Moines Gas Company	Natural Gas	6,000
Eagle Grove—Iowa Public Service Co...	Natural Gas	7,500

(Here follows 1 map, 1 folio 940.)

Plaintiff's Ex. 33

States In Which 100,000 Or More Tons Of Anthracite Coal Were Distributed In The Coal Year, April 1, 1928, To March 31, 1929



20,000,000 or more tons
5,000,000 - 20,000,000 tons
500,000 - 5,000,000 tons
100,000 - 500,000 tons

Source: Compiled from data on "Distribution of Pennsylvania Anthracite In the Coal Year April 1, 1928, to March 31, 1929," page 4 of multigraphed release dated July 20, 1932 of Statistics Section, Coal Division, Bureau of Mines.

[fol. 941] PLAINTIFF'S EXHIBIT 34

M. C. D. 77

No. 12

Distribution of Pennsylvania Anthracite in the Coal Year April 1, 1928, to March 31, 1929[a]

(Includes both steam and domestic sizes, but not colliery fuel)

Distribution[a]	Quantity in [b]net tons	Percent of total
New England States:		
Maine	479,402	0.7
New Hampshire	662,541	1.0
Vermont	363,444	0.5
Massachusetts	5,031,715	7.4
Rhode Island	550,169	0.8
Connecticut	1,974,004	2.9
	9,061,275	13.3
Middle Atlantic States:		
New York	22,536,054	33.1
New Jersey	9,877,510	14.5
Pennsylvania	14,298,666	21.0
Delaware	293,691	0.4
Maryland	1,020,499	1.5
District of Columbia	475,148	0.7
	48,501,568	71.2
North Central States:		
Ohio	294,673	0.4
Michigan	648,408	1.0
Indiana	136,565	0.2
Illinois	1,008,533	1.5
	2,088,179	3.1
Missouri Val. States:		
Missouri	18,494	(c)
Iowa	100,381	0.1
Nebraska	35,386	0.1
Kansas	2,036	(c)
	156,297	0.2
Lake Dock States:		
Wisconsin	941,422	1.4
Minnesota	465,312	0.6
North Dakota	56,933	0.1
South Dakota	77,449	0.1
	1,541,116	2.2
Southeastern States:		
West Virginia	9,738	(c)
Virginia	142,479	0.2
North Carolina	8,643	(c)
South Carolina	14,889	(c)
Georgia	6,281	(c)
Florida	6,536	(c)
Kentucky	31	(c)
	188,597	0.3

PLAINTIFF'S EXHIBIT 34—Continued

Distribution	Quantity in [b]net tons	Percent of total
Western States:		
Wyoming	44	(c)
Montana	312	(c)
Washington	45	(c)
	401	(c)
Total less R. R. fuel	61,537,433	90.3
Used for R. R. fuel	3,177,885	4.7
Total in U. S.	64,715,318	95.0
Exports:		
Canada	[d]3,396,253	5.0
All other countries	[d]34,135	(c)
	3,430,388	5.0
Total Distribution	68,145,706	100.0

(a) The above figures do not include colliery fuel. The colliery fuel in 1928-1929 amounted to about 5,860,000 net tons, which added to the total sold makes a grand total of 74,005,706. (b) Based on figures collected by the Anthracite Bureau of Information, supplemented by data from the anthracite originating railroads, the lake dock operators, anthracite dredge operators, and manufacturers of fuel briquets. Totals include dredge coal, and culm made into fuel briquets. (c) Less than 0.05 per cent. (d) Customs records as reported by the Bureau of Foreign and Domestic Commerce.

Distribution of Pennsylvania Anthracite Coal from the Upper Lake Docks, Calendar Year, 1929, in Net Tons[a]

(As reported by the dock operators. Note that the dock shipments are also included in the preceding table.)

	Lake Superior docks	Lake Michigan (West Bank) docks	Lake Docks (All other)	Total
Wisconsin	59,391	629,491	....	688,882
Minnesota	372,055	87,728	...	459,783
North Dakota	40,488	11,301	....	51,789
South Dakota	56,187	17,054	...	73,241
Illinois	651	16,080	...	16,731
Michigan	32,660	7,019	765	40,444
Iowa	8,424	3,782	...	12,206
Nebraska	4,865	581	...	5,446
	574,721	773,086	765	1,348,522
Railroad fuel	3,432	178	...	3,610
Exports to Canada[b]	3,453	.....	...	3,453
Total	581,606	773,214	765	1,355,585

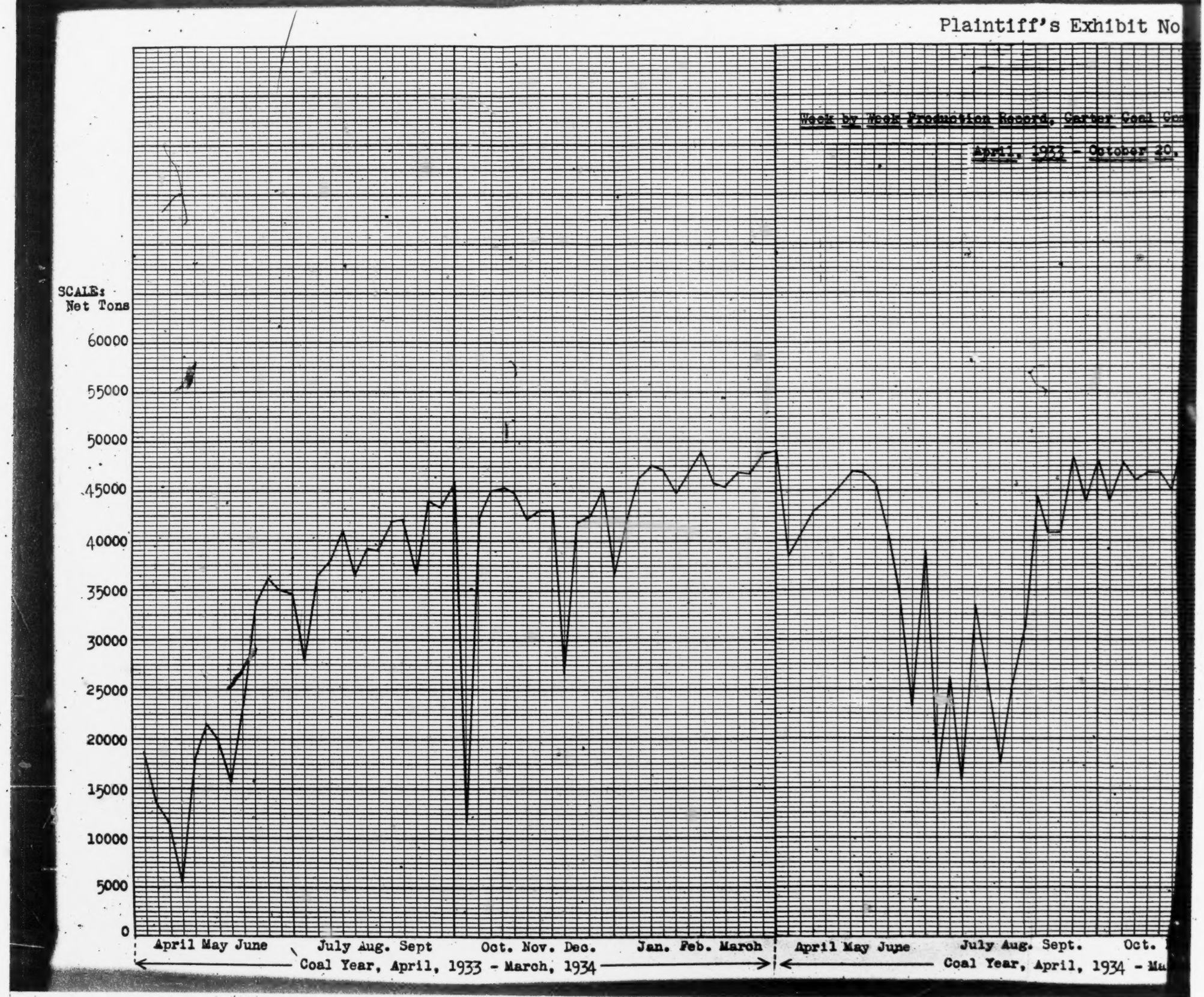
(a) Anthracite loadings at Lake Erie ports, according to Ore and Coal Exchange, amounted to 1,321,328 net tons. The slight discrepancy may be accounted for by changes in stocks. (b) Exports to Canada by rail from Lake Superior docks.

By F. G. Tryon and W. H. Young, Statistics Section, Coal Division.
C. P. White, Head, Coal Division.

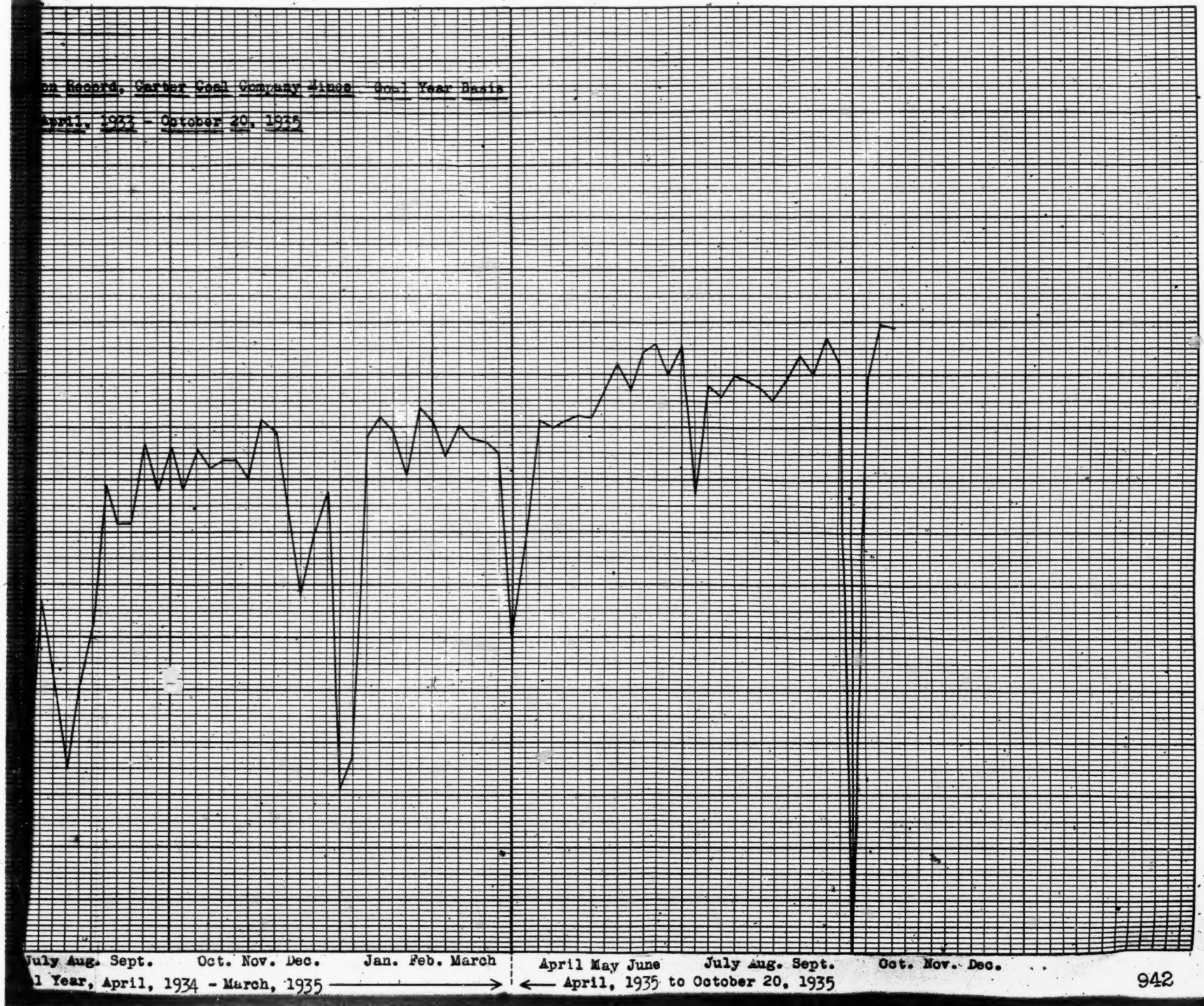
July 20, 1932.

(Here follow 4 maps, folios 942-945.)

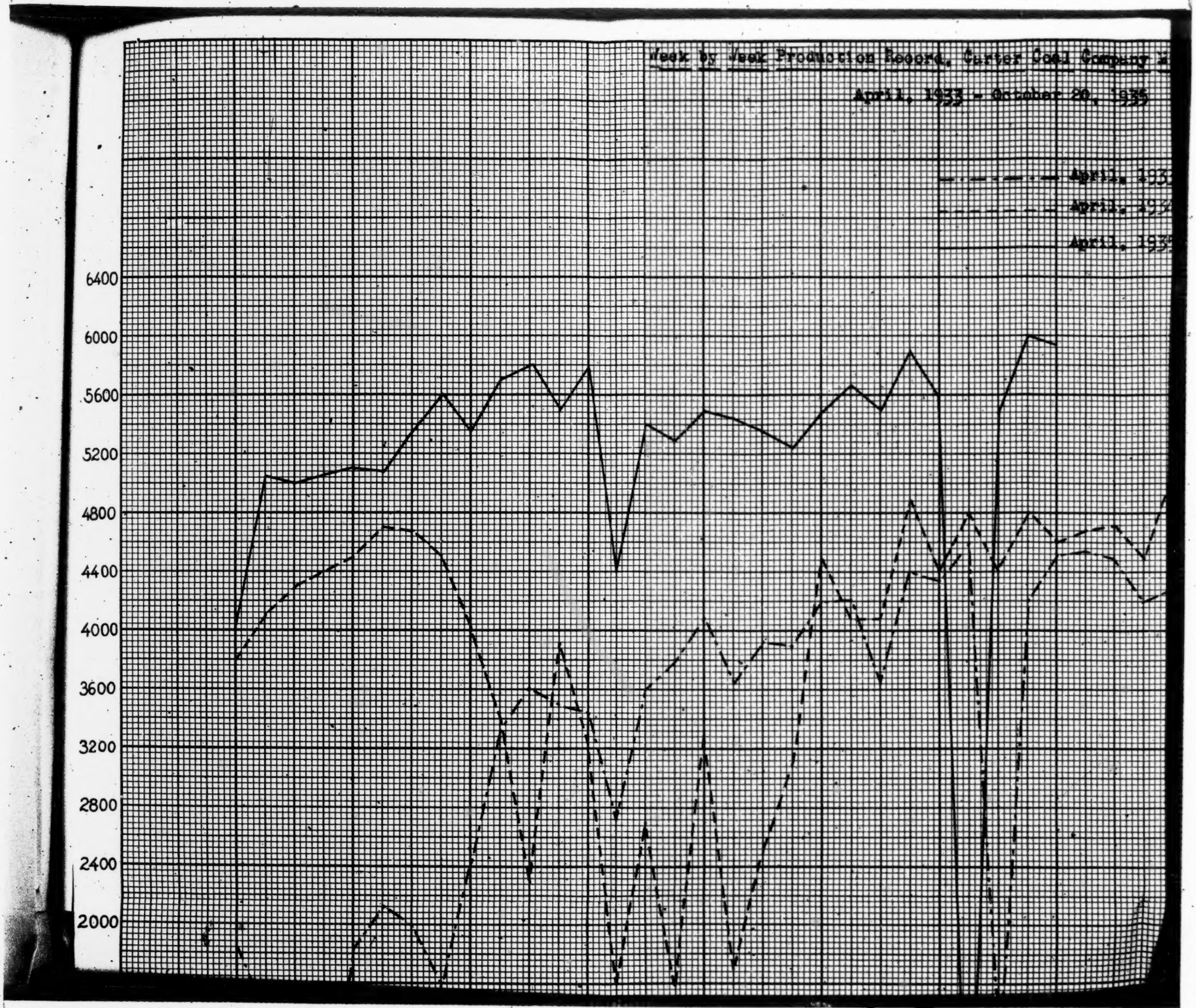
Plaintiff's Exhibit No

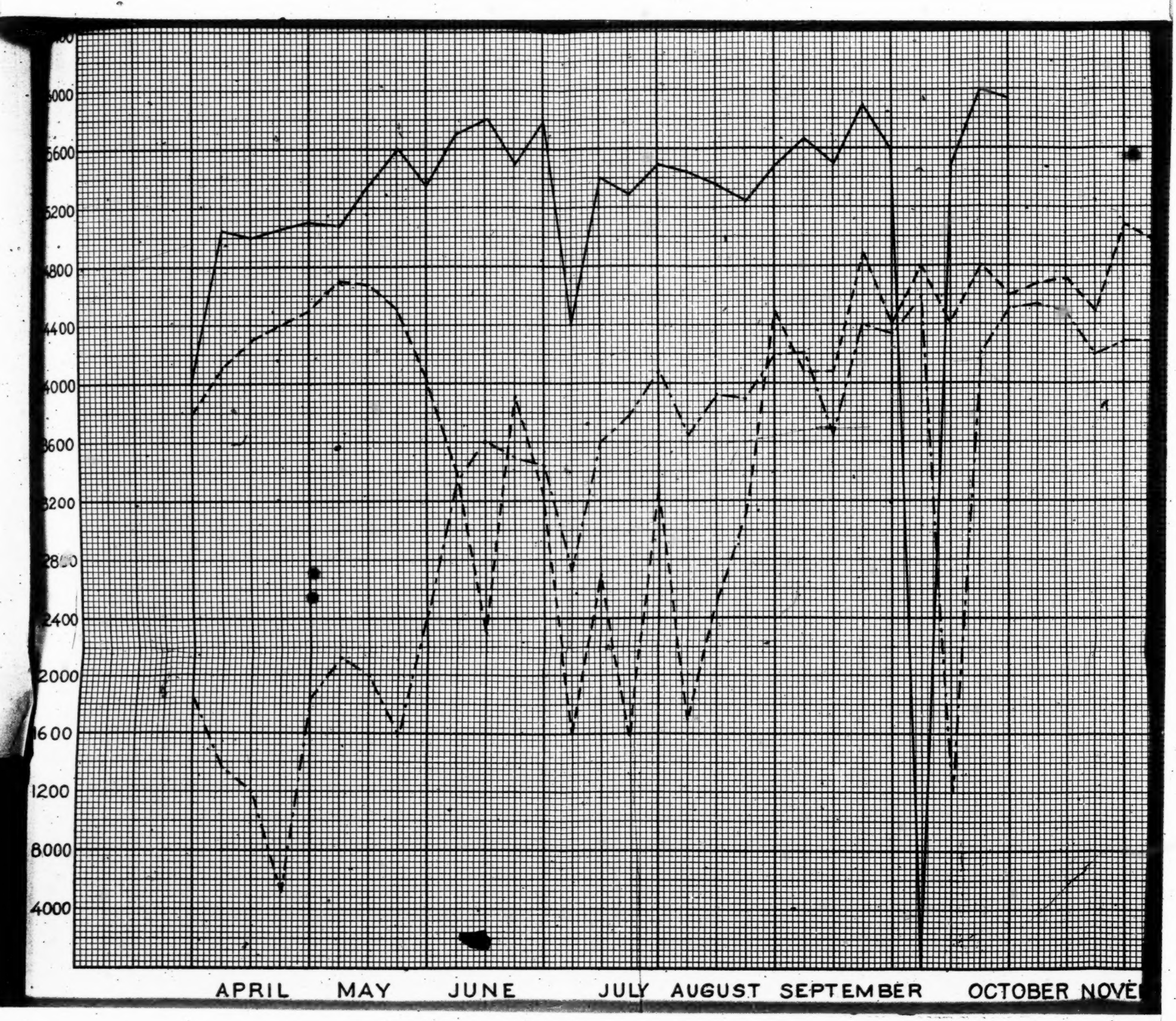


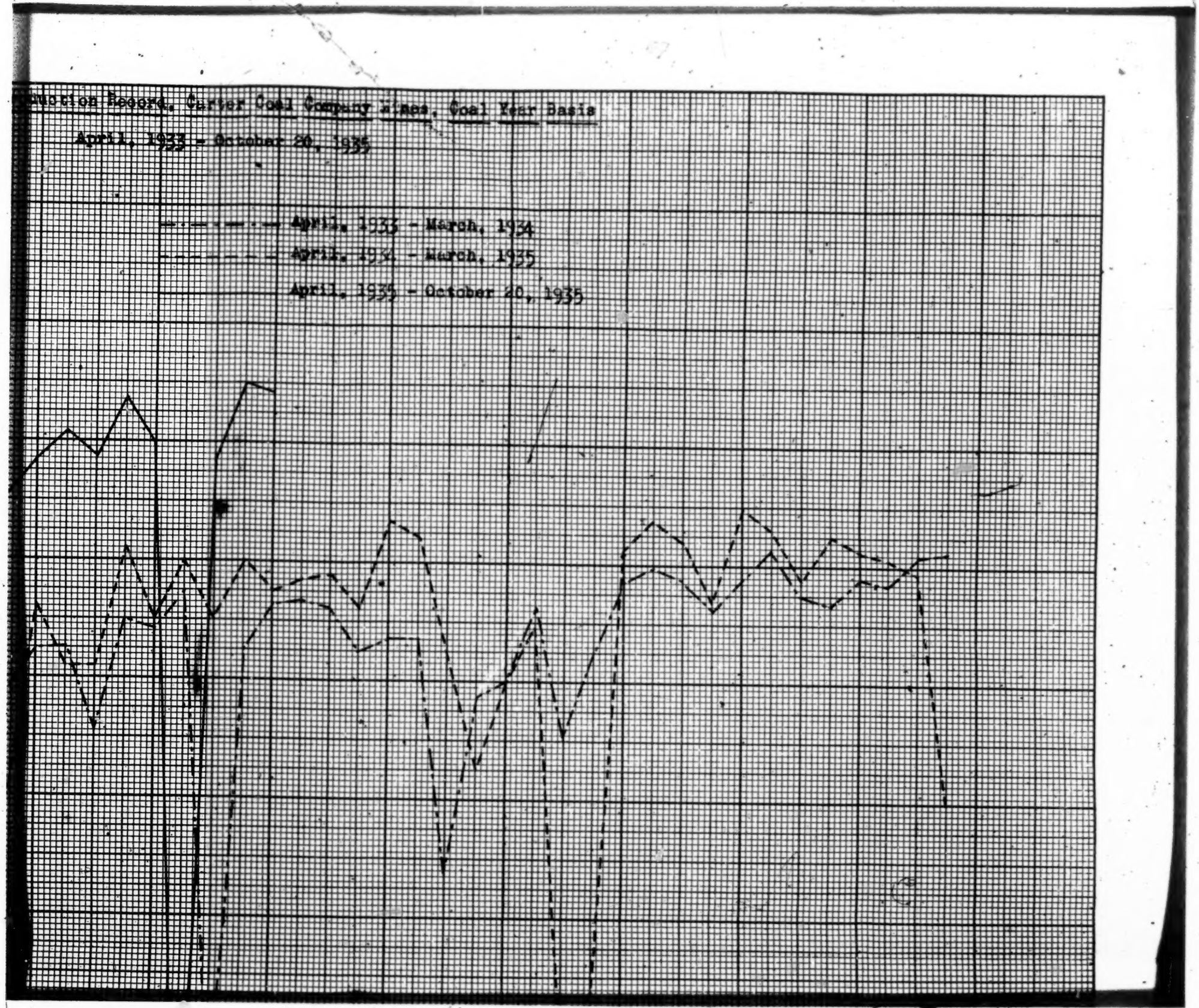
Plaintiff's Exhibit No. 44

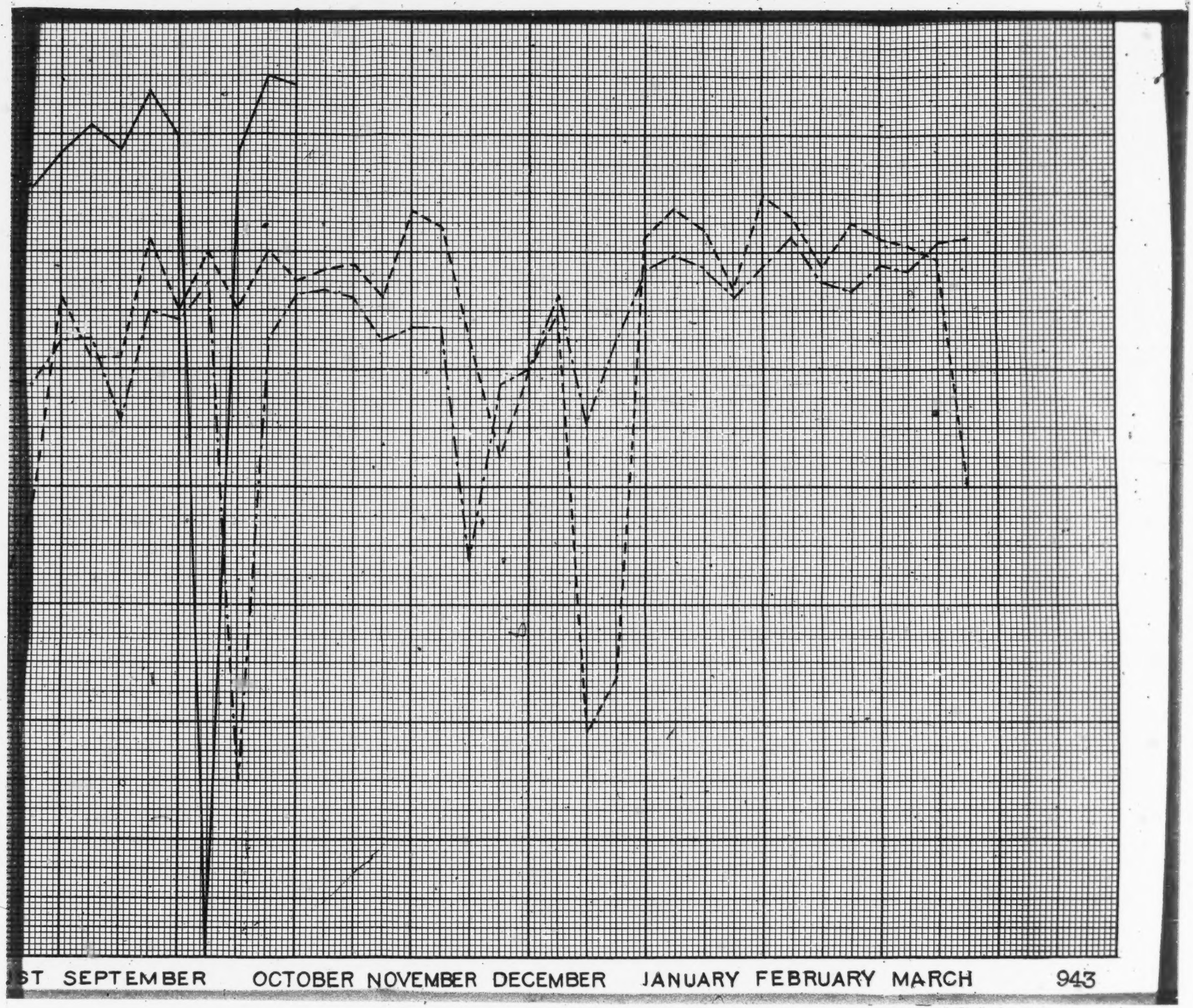


942

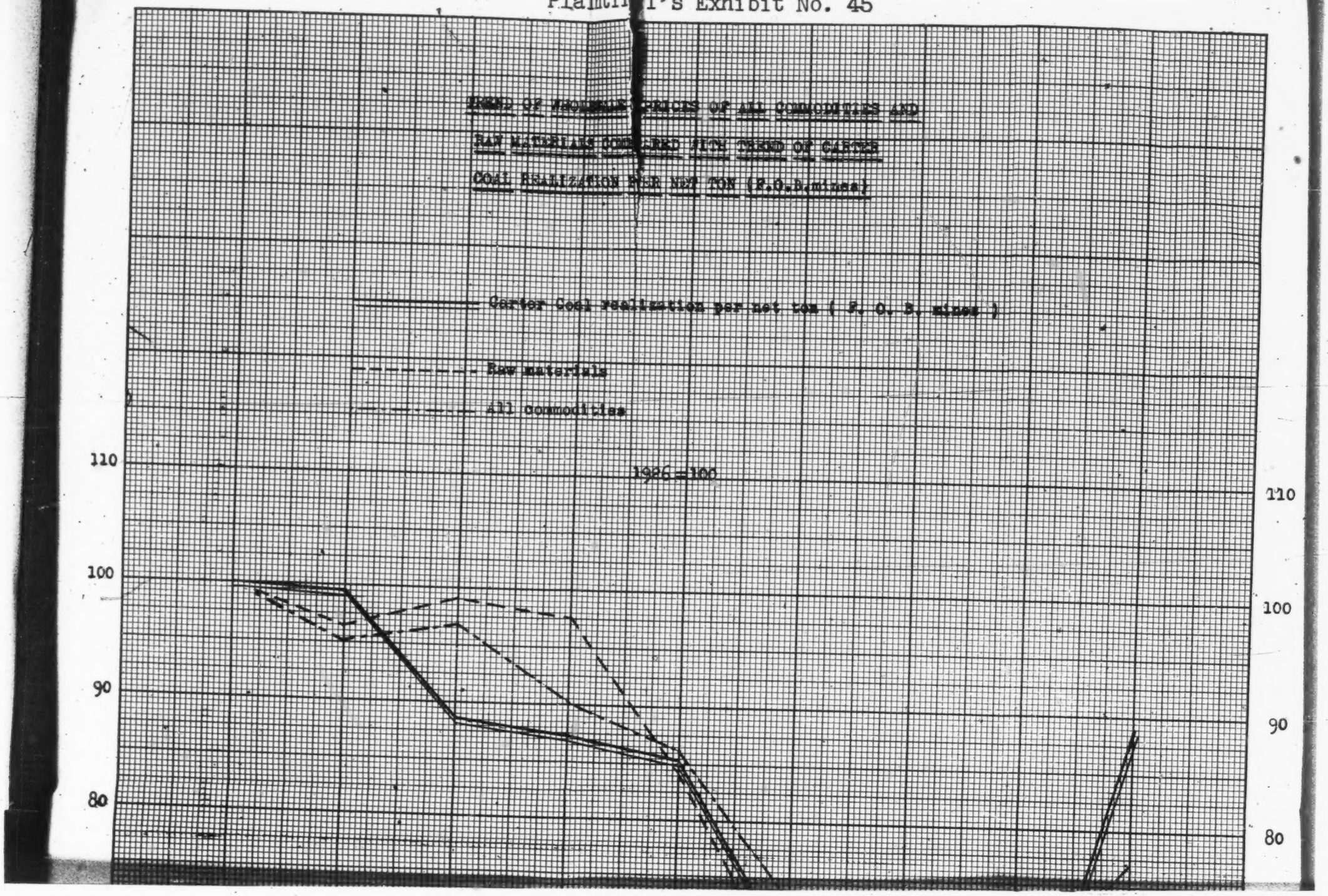

Week by Week Production Record, Carter Coal Company
April, 1933 - October 20, 1935
April, 193
April, 193
April, 193
6400
6000
5600
5200
4800
4400
4000
3600
3200
2800
2400
2000

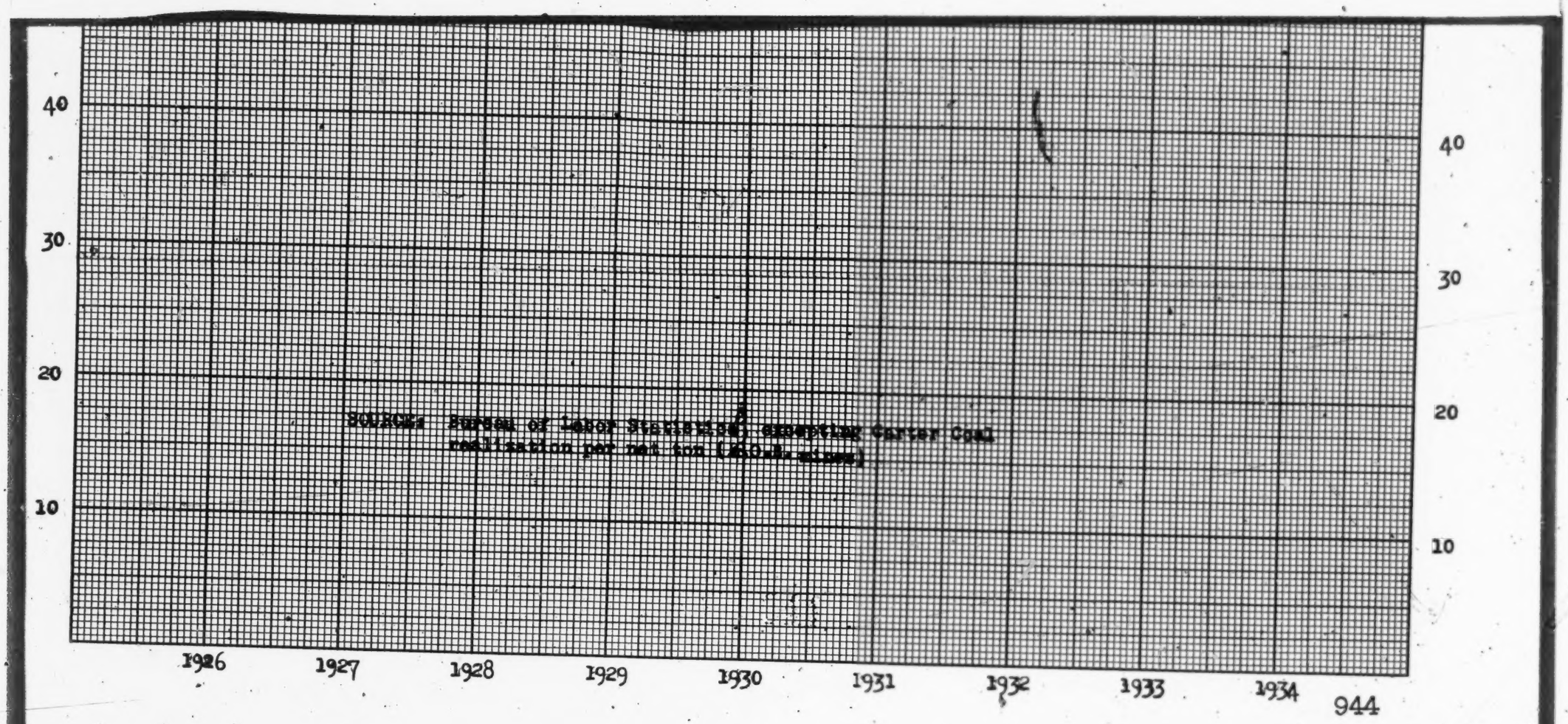

6000
5600
5200
4800
4400
4000
3600
3200
2800
2400
2000
1600
1200
8000
4000
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER


Production Record, Carter Coal Company Mines, Coal Year Basis
April, 1933 - October 20, 1935
April, 1933 - March, 1934
April, 1934 - March, 1935
April, 1935 - October 20, 1935


ST SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
943

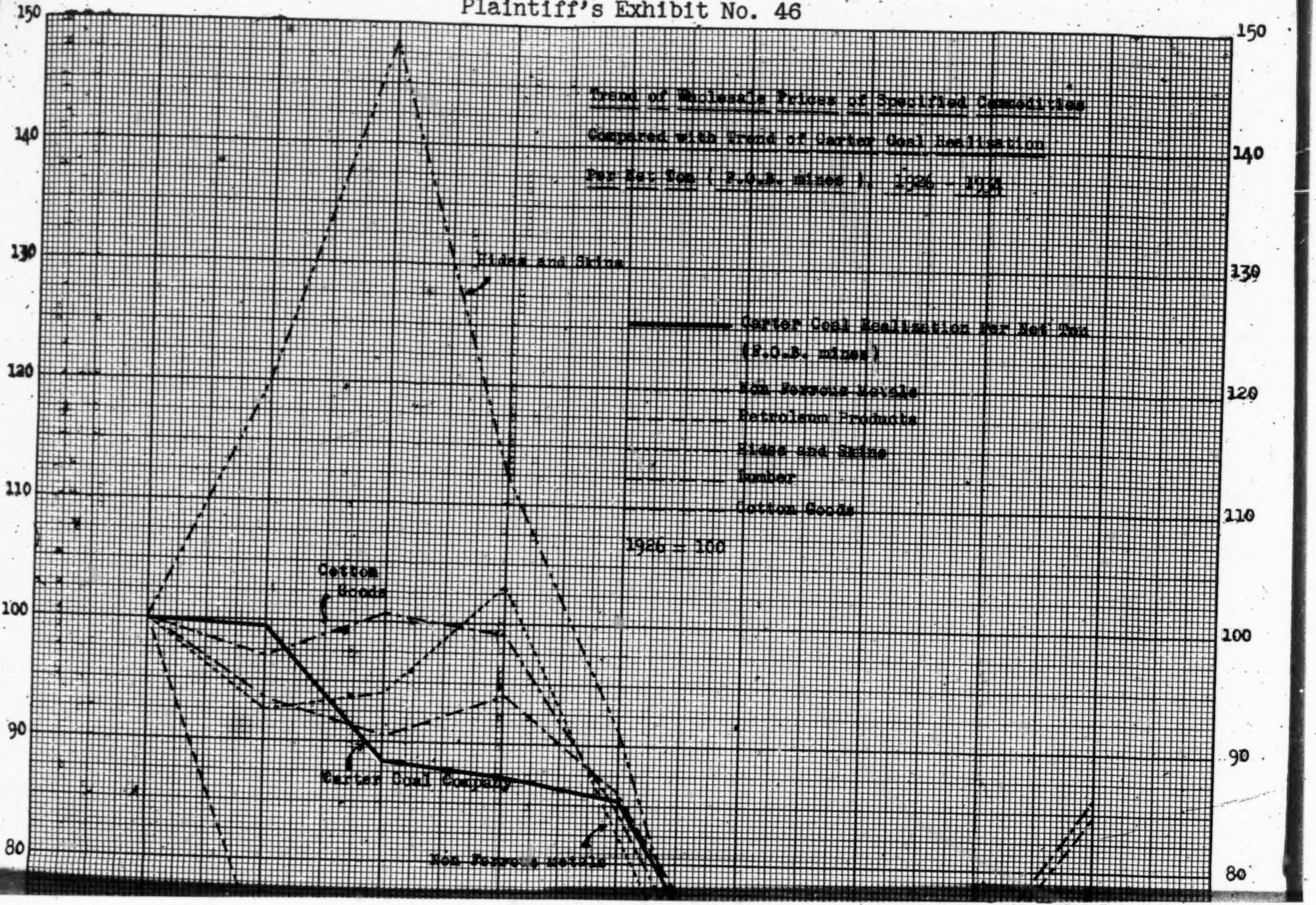
Plaintiff's Exhibit No. 45

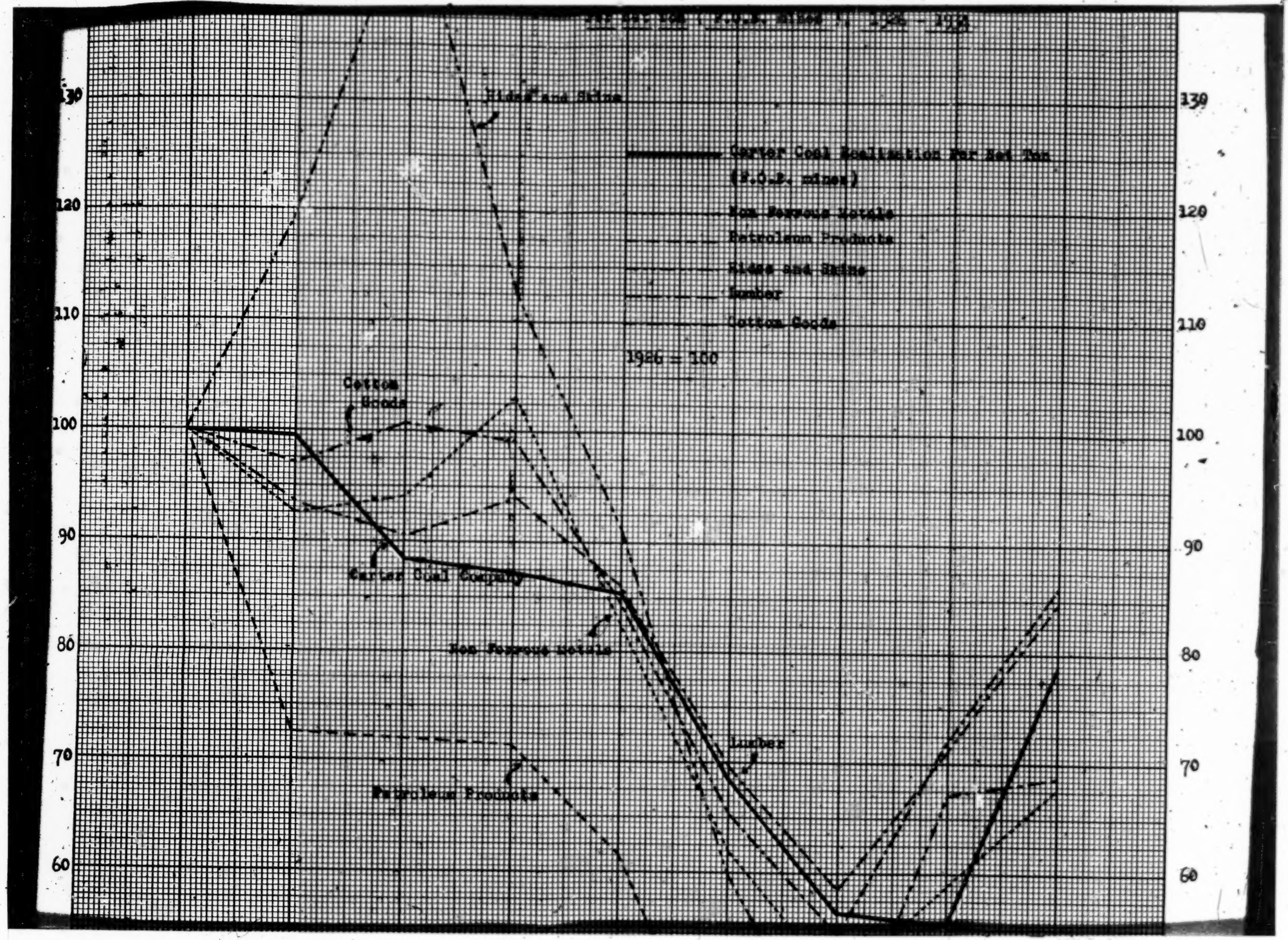


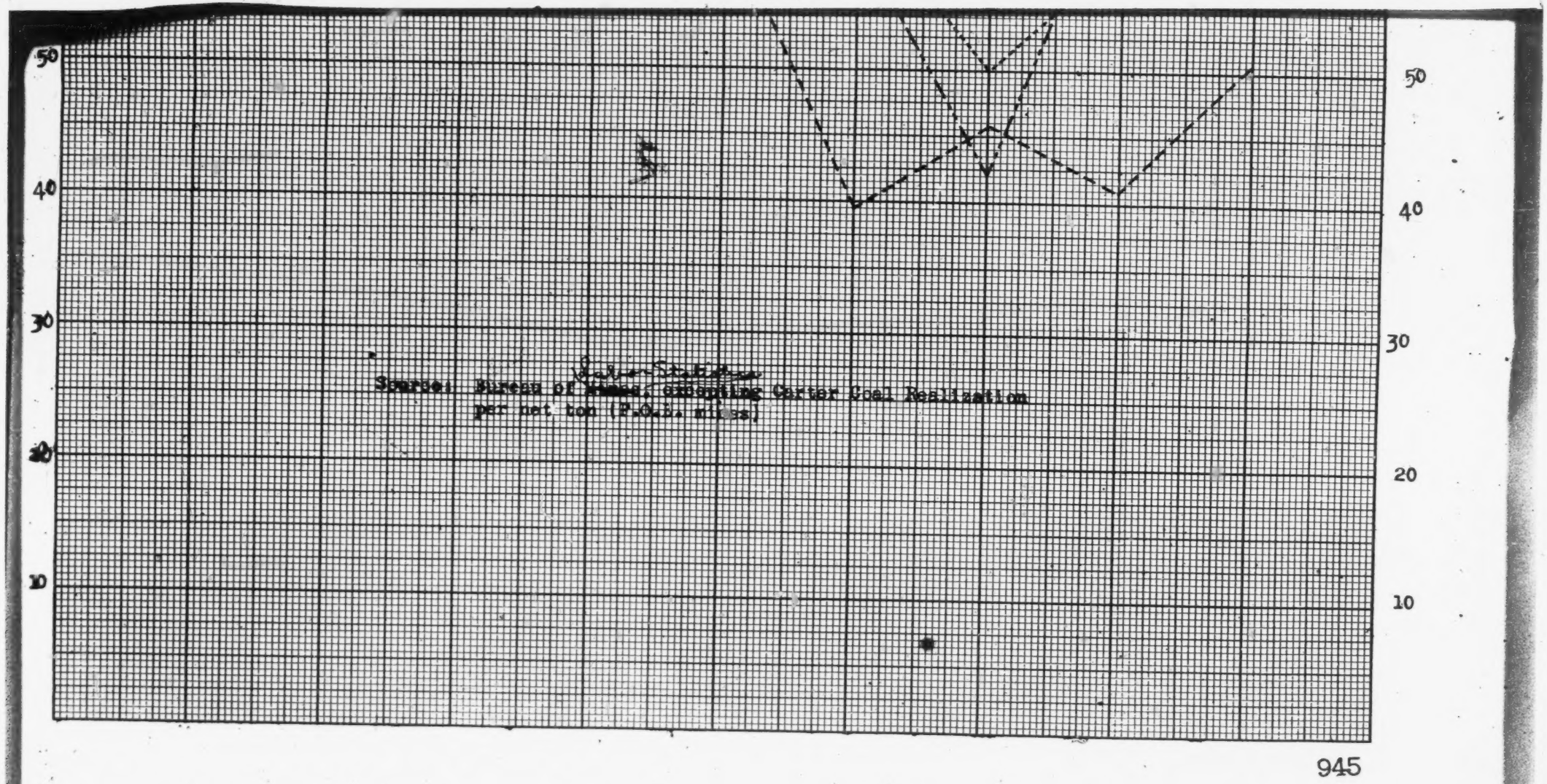

40
30
20
10
1926
1927
1928
1929
1930
1931
1932
1933
1934
SOURCE: Bureau of Labor Statistics, excepting Carter Coal
realization per net ton (U.S.D.I., mines)

944

Plaintiff's Exhibit No. 46




Hides and Skins
Carter Coal Realization Per Net Ton (B.C.D.C. mines)
Non Ferrous Metals
Petroleum Products
Hides and Skins
Lumber
Cotton Goods
1926 = 100
Cotton Goods
Carter Coal Company
Non Ferrous Metals
Lumber
Petroleum Products
130
120
110
100
90
80
70
60


50
40
30
20
10
$
Source: Bureau of Mines, showing Carter Coal Realization
per net ton (F.O.B. mine)

[fol. 946]

PLAINTIFF'S EXHIBIT 47

Index Number of Wholesale Prices of Specified Commodities and of Carter Coal Realization Per Net Ton (F. O. B. Mines), 1926–1934

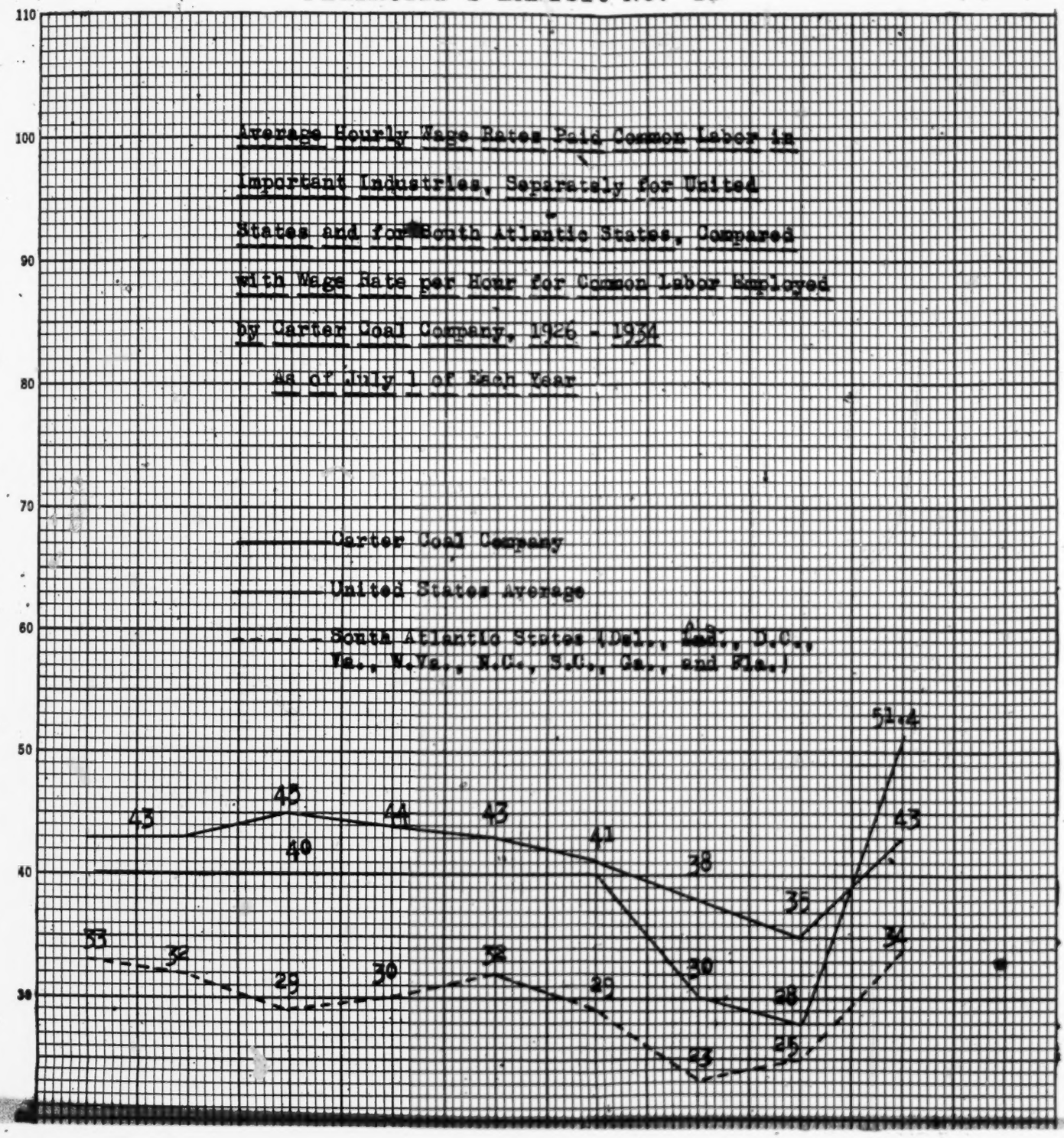
1926 = 100

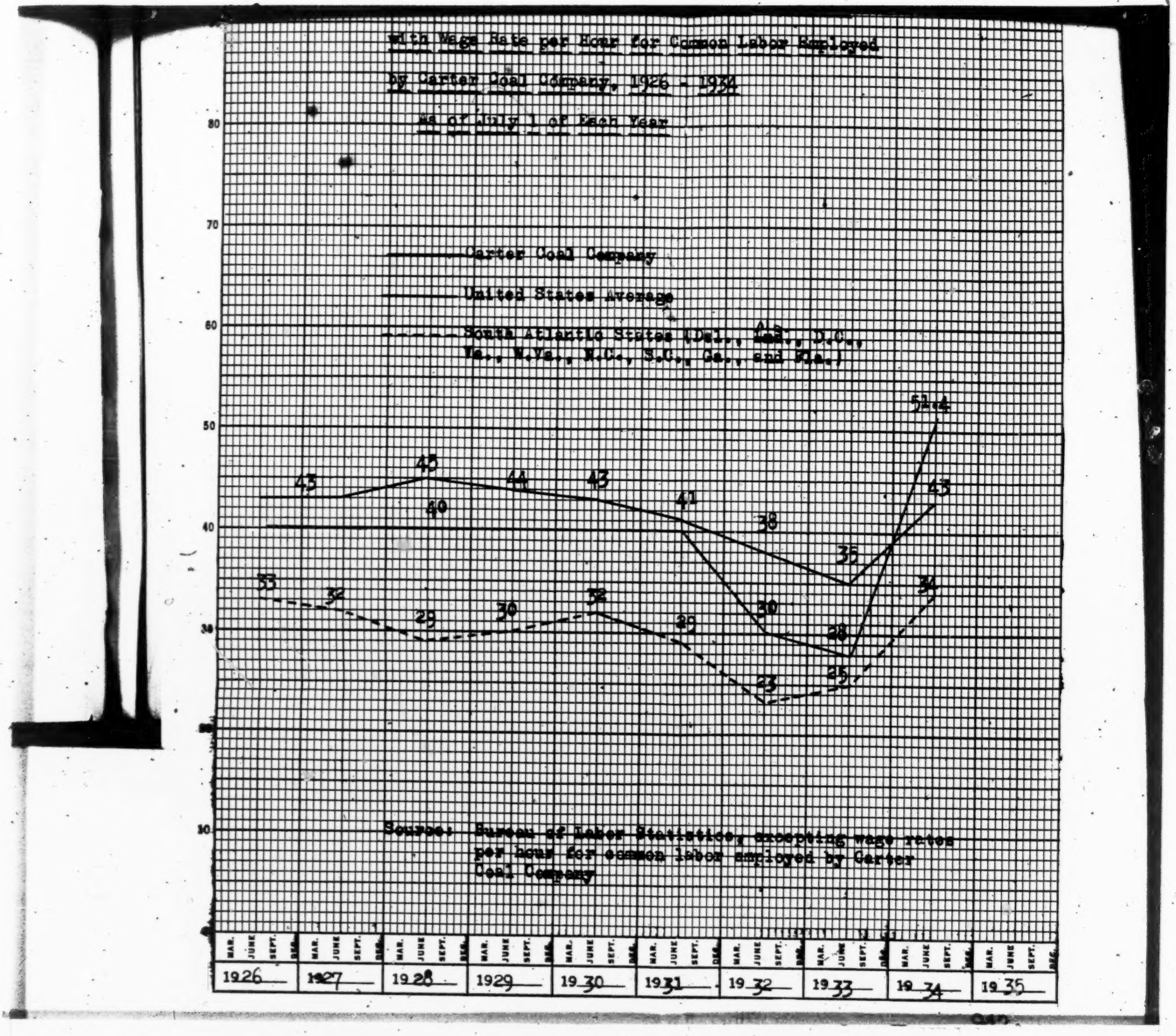
	Wholesale Prices							
	Nonferrous Metals	Petroleum Products	Lumber	Cotton Goods	Hides and Skins	Raw Materials	All Commodities	Carter Coal Realization Per Net Ton (F. O. B. Mines)
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	92.8	72.7	93.1	97.1	120.3	96.5	95.4	99.5
1928	94.0	72.0	90.5	100.4	148.6	99.1	96.7	88.9
1929	106.1	71.3	93.8	98.8	112.7	97.5	95.3	87.4
1930	82.4	61.5	85.8	84.7	91.0	84.3	86.4	85.5
1931	61.9	39.5	69.5	66.1	60.2	65.6	73.0	68.6
1932	49.8	45.4	58.5	54.0	42.1	55.1	64.8	56.5
1933	59.6	41.0	70.7	71.2	67.1	56.5	65.9	55.6
1934	67.7	50.5	84.5	86.5	68.6	68.6	74.9	88.9

Source: Bureau of Labor Statistics, United States Department of Labor.

(Here follows 1 map, folio 947.)

Plaintiff's Exhibit No. 48




Wage Rate per Hour for Common Labor Employed
by Carter Coal Company, 1926 - 1934
As of July 1 of Each Year
Carter Coal Company
United States Average
South Atlantic States (Del., Md., D.C., Va., W.Va., N.C., S.C., Ga., and Fla.)
80
70
60
50
40
30
20
10
43
45
44
43
41
38
35
51.4
43
40
33
32
29
30
32
29
30
28
23
25
34
MAR. JUNE SEPT. DEC.
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
Source: Bureau of Labor Statistics, excepting wage rates per hour for common labor employed by Carter Coal Company

[fol. 948]

PLAINTIFF'S EXHIBIT 49

Average Hourly Entrance Wage Rates for Adult Male Common Labor

July of Each Year, 1926 to 1934

Industry	Average hourly entrance rates (in cents) in—								
	1926	1927	1928	1929	1930	1931	1932	1933	1934
Automobile	46.1	46.3	57.2	49.9	48.2	57.7	62.0	46.5	54.9
Brick, tile, and terra cotta	40.7	42.2	39.4	37.8	38.0	33.9	28.9	24.7	36.9
Cement	40.1	39.2	37.2	37.8	37.9	37.2	30.6	29.5	44.7
Electrical machinery, apparatus, and supplies	43.1	44.2	46.0	45.9	44.8	42.9	39.6	37.1	43.5
Foundry and machine-shop products	37.1	37.8	38.4	39.8	39.0	38.2	34.8	31.8	40.1
Iron and steel	42.7	43.2	42.5	42.5	42.1	41.8	31.8	33.6	43.2
Leather	40.9	41.4	42.3	42.2	41.9	39.1	32.9	31.6	39.3
Lumber (sawmills)	33.6	32.2	31.7	32.0	31.6	27.7	21.5	20.8	33.1
Paper and pulp	42.8	42.5	44.3	44.0	43.2	37.2	35.6	32.6	40.3
Petroleum refining	47.9	44.0	45.4	45.7	48.1	47.5	42.1	40.7	52.6
Slaughtering and meat packing	41.5	41.7	42.2	42.0	41.8	41.7	34.6	32.3	43.9
Public utilities	42.0	39.8	42.9	42.8	44.6	44.6	41.5	38.7	41.8
General contracting	47.1	48.2	47.4	48.3	47.0	42.6	39.9	38.3	45.5
All industries	42.8	42.6	44.9	43.7	43.1	41.2	38.1	35.0	43.0
All industries except general contracting	40.9	40.4	44.1	42.1	41.6	40.7	37.6	34.2	42.3
New England	47.1	46.7	48.2	48.0	49.5	45.4	40.4	37.1	43.3
Middle Atlantic	45.1	47.2	47.8	46.4	46.1	45.1	40.4	36.7	45.2
East North Central	48.0	46.7	51.6	48.4	47.0	45.2	45.0	38.9	47.9
West North Central	42.1	40.6	41.3	41.8	40.6	42.9	35.8	34.5	43.2
South Atlantic	32.8	31.5	29.4	30.2	32.1	28.9	23.4	25.3	33.6
East South Central	27.6	27.0	26.0	26.8	26.7	25.2	21.0	25.7	34.1
West South Central	32.5	31.8	33.8	35.6	33.0	29.9	23.7	23.4	32.7
Mountain	44.4	44.4	44.0	44.9	45.2	43.1	39.3	42.3	46.4
Pacific	45.9	46.5	46.9	47.9	47.6	43.5	40.2	38.0	46.9

Source: Bureau of Labor Statistics.

Table 333, page 303, Statistical Abstract, 1934, Except 1934 Figures Which are from Serial No. R. 196 (Dec. 1934 Issue of Monthly Labor Review).

[fol. 949]

PLAINTIFF'S EXHIBIT 50

Wage Rates Per Hour of Specified Types of Labor, Carter Coal Company, 1926–1935 As of July 1 of Each Year

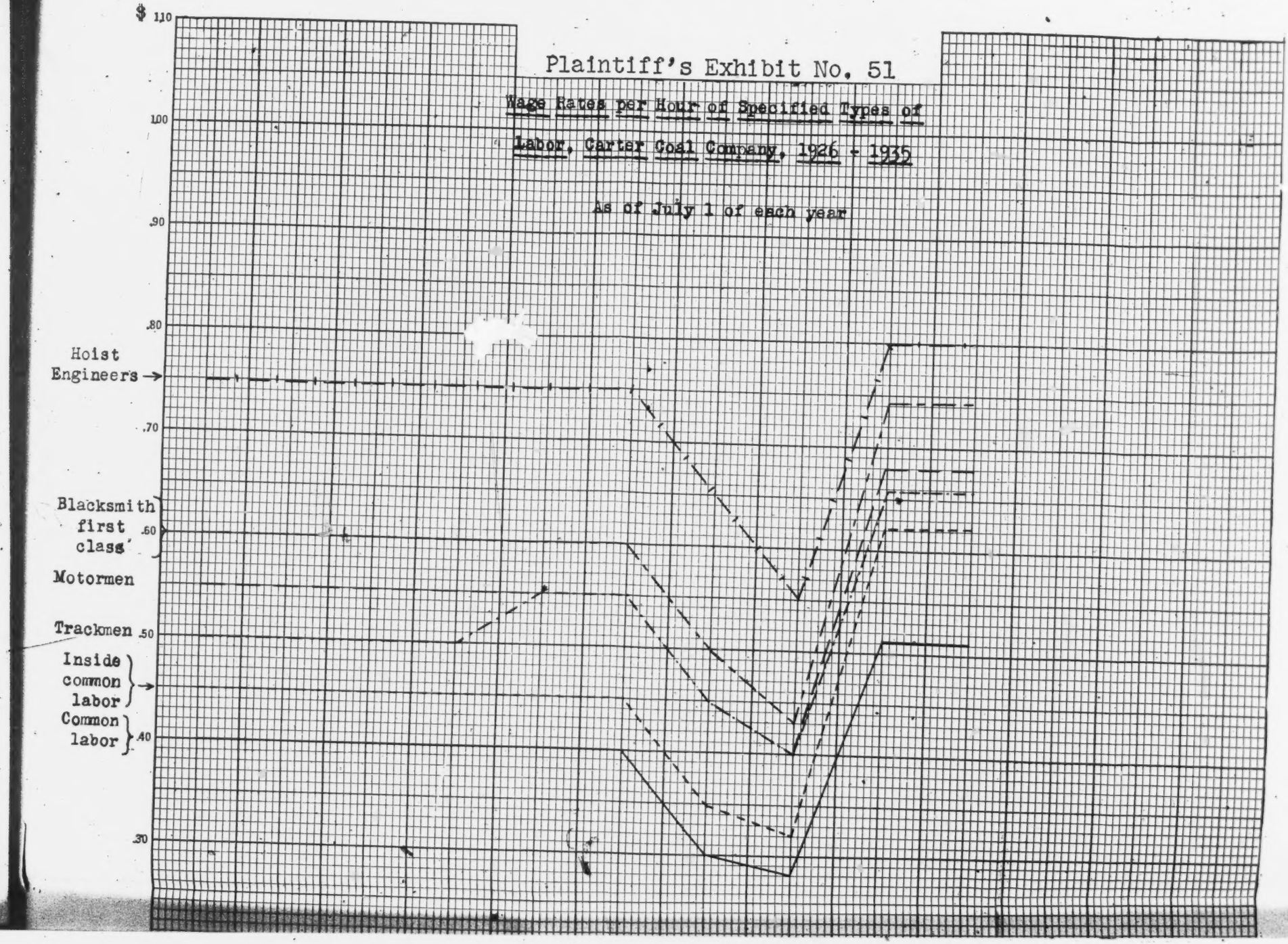
	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Common labor	$.40	$.40	$.40	$.40	$.40	$.40	$.30	$.28	$.514	$.514
Inside common labor	.45	.45	.45	.45	.45	.45	.35	.32	.623	.623
Trackmen	.50	.50	.50	.50	.55	.55	.45	.40	.657	.657
Motormen	.55	.55	.55	.55	.55	.55	.45	.40	.68	.68
Blacksmith, first class	.60	.60	.60	.60	.60	.60	.50	.43	.743	.743
Hoist engineers	.75	.75	.75	.75	.75	.75	.65	.55	.80	.80

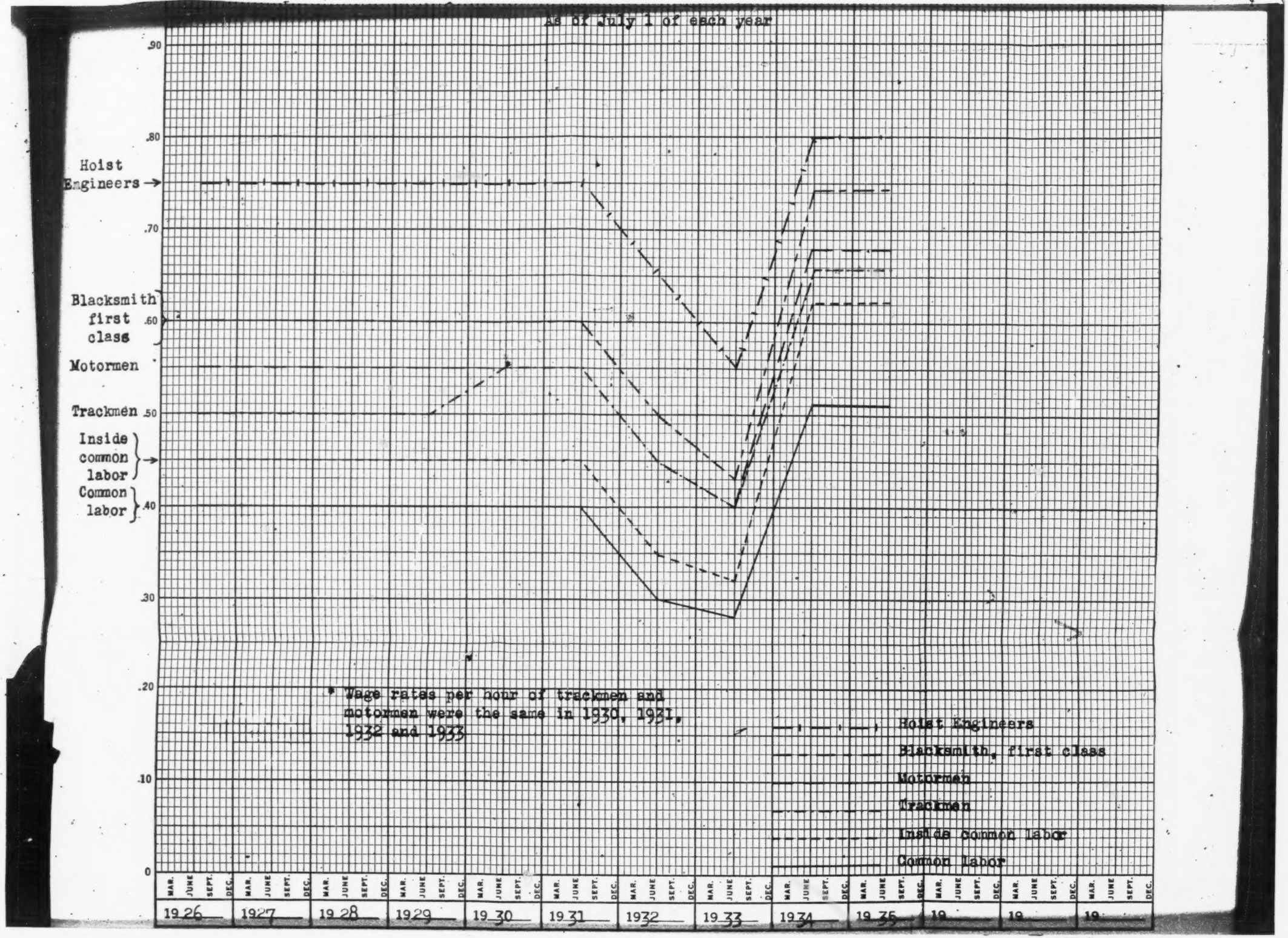
(Here follow 1 drawing, folio 950; 1 table, folio 951; 1 map, folio 952.)

Plaintiff's Exhibit No. 51

Wage Rates per Hour of Specified Types of Labor, Carter Coal Company, 1926 - 1935

As of July 1 of each year




As of July 1 of each year
.90
.80
.70
.60
.50
.40
.30
.20
.10
0
Hoist Engineers
Blacksmith first class
Motormen
Trackmen
Inside common labor
Common labor
* Wage rates per hour of trackmen and motormen were the same in 1930, 1931, 1932 and 1933
Hoist Engineers
Blacksmith, first class
Motormen
Trackmen
Inside Common Labor
Common Labor
MAR. JUNE SEPT. DEC.
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
19
19
19

CARTER COAL COMPANY

STATEMENT OF PRODUCTION AND REALIZATION BY STATES IN WHICH MINES ARE LOCATED AND OF OPERATING EXPENSES, INSURANCE, TAXES, ETC., BY YEARS, 1923 TO 1934 INCLUSIVE

OPERATIONS UNDER THE CONSOLIDATION COAL COMPANY MANAGEMENT

Particulars	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
(a) PRODUCTION IN NET TONS:										
West Virginia	498,744	772,449	1,220,285	1,575,801	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,62
Virginia	123,714	40,331	35,610	20,513	--	--	--	--	--	--
Kentucky	63,446	--	--	--	--	--	--	--	--	--
Total	685,904	812,780	1,255,899	1,596,314	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,62
(c) AVERAGE MINE REALIZATION:										
West Virginia										
Amount	$1,679,195	$1,549,379	$2,362,778	$3,260,185	$3,646,842	$3,450,901	$3,545,890	$3,393,577	$2,362,534	$ 942,62
Per Ton Produced	($3.367)	($2.006)	($1.936)	($2.069)	($2.057)	($1.843)	($1.806)	($1.766)	($1.416)	($1.167
Virginia										
Amount	404,008	74,245	70,173	38,950	--	--	--	--	--	--
Per Ton Produced	($3.266)	($1.841)	($1.971)	($1.899)	--	--	--	--	--	--
Kentucky										
Amount	178,335	--	--	--	--	--	--	--	--	--
Per Ton Produced	($2.811)	--	--	--	--	--	--	--	--	--
Total										
Amount	$2,261,538	$1,623,624	$2,432,951	$3,299,135	$3,646,842	$3,450,901	$3,545,890	$3,393,577	$2,362,534	$ 942,62
Per Ton roduced	($3.297)	($1.998)	($1.937)	($2.067)	($2.057)	($1.843)	($1.906)	($1.766)	($1.416)	($1.167
(d) OPERATING EXPENSES, INSURANCE, TAXES, ETC. (Including mine depreciation and depletion, as provided on the books)										
Per Ton Produced	$1,733,838	$1,675,354	$2,185,026	$2,855,840	$2,989,373	$2,912,637	$3,245,577	$3,093,653	$2,600,059	$1,359,3
	($2.528)	($2.061)	($1.740)	($1.789)	($1.686)	($1.555)	($1.653)	($1.610)	($1.558)	($1.66

NOTE: The figures used in this statement were obtained from the following sources:

For the years 1923 to 1931 inclusive (except the split of production and average realization between state

(a) PRODUCTION IN NET TONS:										
West Virginia	498,744	772,449	1,220,285	1,575,801	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,625
Virginia	123,714	40,331	35,610	20,513	--	--	--	--	--	--
Kentucky	63,446	--	--	--	--	--	--	--	--	--
Total	685,904	812,780	1,255,899	1,596,314	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,625
(c) AVERAGE MINE REALIZATION:										
West Virginia										
Amount	$1,679,195	$1,549,379	$2,362,778	$3,260,185	$3,646,842	$3,450,901	$3,545,890	$3,393,577	$2,362,534	$ 942,629
Per Ton Produced	($3.367)	($2.006)	($1.936)	($2.059)	($2.057)	($1.843)	($1.806)	($1.766)	($1.416)	($1.167)
Virginia										
Amount	404,008	74,245	70,173	38,950	--	--	--	--	--	--
Per Ton Produced	($3.266)	($1.841)	($1.971)	($1.899)	--	--	--	--	--	--
Kentucky										
Amount	178,335	--	--	--	--	--	--	--	--	--
Per Ton Produced	($2.811)	--	--	--	--	--	--	--	--	--
Total										
Amount	$2,261,538	$1,623,624	$2,432,951	$3,299,135	$3,646,842	$3,450,901	$3,545,890	$3,393,577	$2,362,534	$ 942,62
Per Ton .roduced	($3.297)	($1.998)	($1.937)	($2.067)	($2.057)	($1.843)	($1.806)	($1.766)	($1.416)	($1.167
(d) OPERATING EXPENSES, INSURANCE, TAXES, ETC. (Including mine depreciation and depletion, as provided on the books)										
Per Ton Produced	$1,733,838	$1,675,354	$2,185,026	$2,855,840	$2,989,373	$2,912,637	$3,245,577	$3,093,653	$2,600,059	$1,359,1
	($2.528)	($2.061)	($1.740)	($1.789)	($1.686)	($1.555)	($1.653)	($1.610)	($1.558)	($1.68

NOTE: The figures used in this statement were obtained from the following sources:

For the years 1923 to 1931 inclusive (except the split of production and average realization between state dation Coal Company and delivered from time to time to Mr. James Walter Carter. The split of production and real the respective years, and the amounts are approximate.

• Includes variation in inventories.

For the year 1932 and for the two and one-half months ended March 15, 1933, the figures were taken by the as maintained by The Consolidation Coal Company management, and are comparable with the figures for prior years i

For the nine and one-half months ended December 31, 1933 and the year 1934, the figures were taken from th (Carter) management, arranged so as to be comparable with the figures for the other years, insofar as it was possi

CARTER COAL COMPANY

STATEMENT OF PRODUCTION AND REALIZATION BY STATES IN WHICH MINES ARE LOCATED AND OF OPERATING EXPENSES, INSURANCE, TAXES, ETC., BY YEARS, 1923 TO 1934 INCLUSIVE

ATIONS	UNDER	THE	CONSOLIDATION	COAL	COMPANY	MANAGEMENT			OPERATIONS UNDER CARTER MANAGEMENT		OPERATIONS UNDER CARTER MANAGEMENT
1925	1926	1927	1928	1929	1930	1931	1932	2½ months Ended March 15, 1933	9½ months Ended December 31, 1933	1933 Combined	1934
20,285	1,575,801	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,625	174,008	1,344,917	1,518,925	2,126,046
35,610	20,513	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
55,899	1,596,314	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,625	174,008	1,344,917	1,518,925	2,126,046
62,778	$3,260,185	$3,646,842	$3,450,901	$3,545,890	$3,393,577	$2,362,534	$ 942,629	$ 185,647	$1,564,833	$1,750,480	$3,918,266
1.936)	($2.069)	($2.057)	($1.843)	($1.806)	($1.766)	($1.416)	($1.167)	($1.067)	($1.164)	($1.152)	($1.843)
79,173	38,950	--	--	--	--	--	--	--	--	--	--
1.971)	($1.899)	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
32,951	$3,299,135	$3,646,842	$3,450,901	$3,545,890	$3,393,577	$2,362,534	$ 942,629	$ 185,647	$1,564,833	$1,750,480	$3,918,266
1.937)	($2.067)	($2.057)	($1.843)	($1.806)	($1.766)	($1.416)	($1.167)	($1.067)	($1.164)	($1.152)	($1.843)
5,026	$2,855,840	$2,989,373	$2,912,637	$3,245,577	$3,093,653	$2,600,059	$1,359,149	$ 228,185	$1,736,364	$1,964,549	$3,334,446
.740)	($1.789)	($1.686)	($1.555)	($1.653)	($1.610)	($1.558)	($1.683)	($1.311)	($1.291)	($1.293)	($1.568)

this statement were obtained from the following sources:

1925	1926	1927	1928	1929	1930	1931	1932	2½ months Ended March 15, 1933	9½ months Ended December 31, 1933	1933 Combined	1934
1,220,285	1,575,801	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,625	174,008	1,344,917	1,518,925	2,126,046
35,610	20,513	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
1,255,895	1,596,314	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,625	174,008	1,344,917	1,518,925	2,126,046
$2,362,778	$3,260,185	$3,646,842	$3,450,901	$3,545,890	$3,393,577	$2,362,534	$ 942,629	$ 185,647	$1,564,833	$1,750,480	$3,918,266
($1.936)	($2.069)	($2.057)	($1.843)	($1.806)	($1.766)	($1.416)	($1.167)	($1.067)	($1.164)	($1.152)	($1.843)
70,173	38,950	--	--	--	--	--	--	--	--	--	--
($1.971)	($1.899)	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
$2,432,951	$3,299,135	$3,646,842	$3,450,901	$3,545,890	$3,393,577	$2,362,534	$ 942,629	$ 185,647	$1,564,833	$1,750,480	$3,918,266
($1.937)	($2.067)	($2.057)	($1.843)	($1.806)	($1.766)	($1.416)	($1.167)	($1.067)	($1.164)	($1.152)	($1.843)
$2,195,026	$2,855,840	$2,989,373	$2,912,637	$3,245,577	$3,093,653	$2,600,059	$1,359,149	$ 228,185	$1,736,364	$1,964,549	$3,334,446
($1.740)	($1.789)	($1.686)	($1.555)	($1.653)	($1.610)	($1.558)	($1.683)	($1.311)	($1.291)	($1.293)	($1.568)

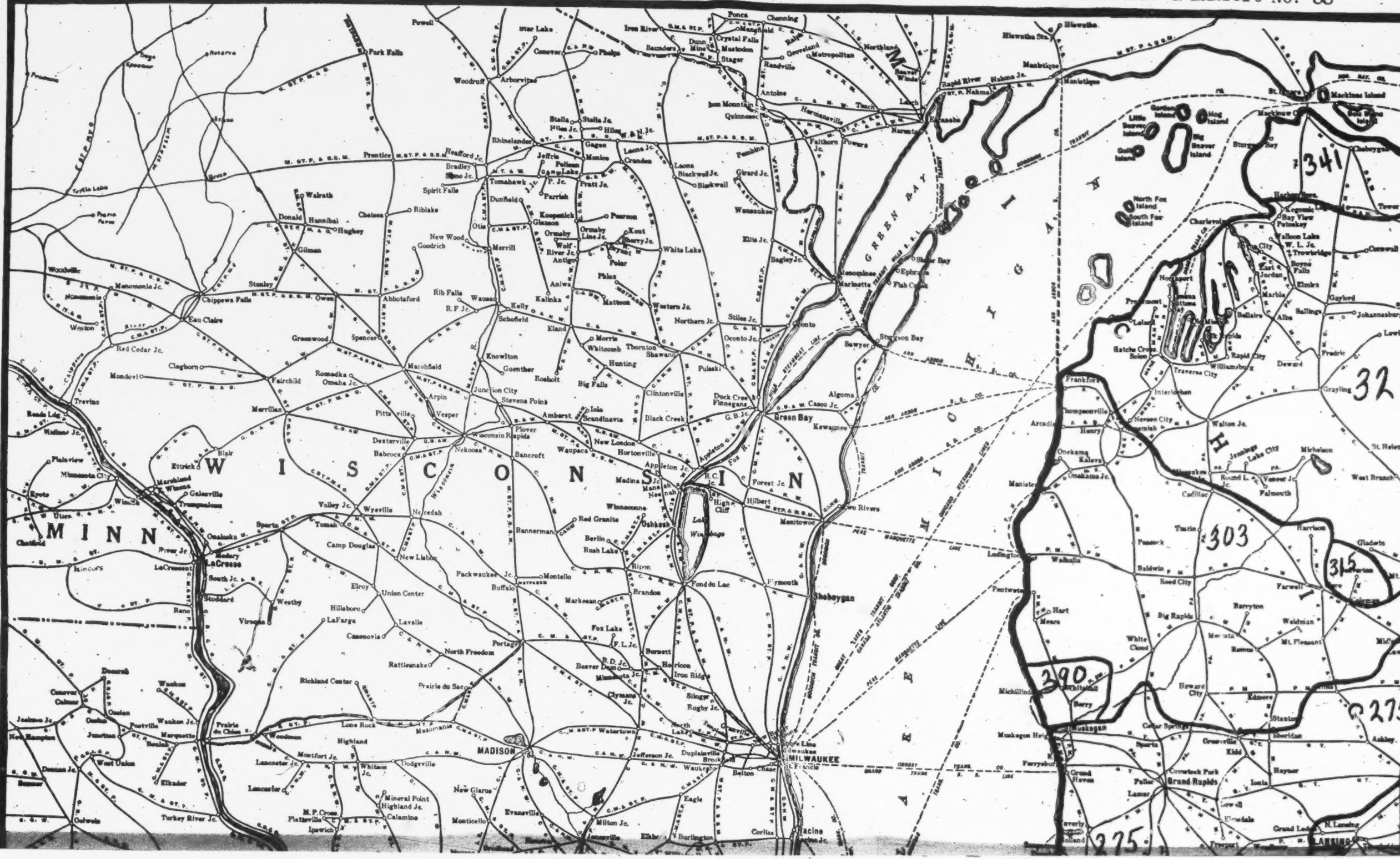
in this statement were obtained from the following sources:

923 to 1931 inclusive (except the split of production and average realization between states) the figures were taken from statements prepared by The Consoli- delivered from time to time to Mr. James Walter Carter. The split of production and realization as between states was made from analysis of billings for and the amounts are approximate.

32 and for the two and one-half months ended March 15, 1933, the figures were taken by the present (Carter) management from the records of Carter Coal Company onsolidation Coal Company management, and are comparable with the figures for prior years insofar as it was possible to determine.

d one-half months ended December 31, 1933 and the year 1934, the figures were taken from the records of Carter Coal Company as maintained by the present ranged so as to be comparable with the figures for the other years, insofar as it was possible to determine.

Plaintiff's Exhibit No. 53


WISCONSIN
MINN
MICHIGAN
MADISON
MILWAUKEE
Green Bay
Sheboygan
Manitowoc
Oshkosh
Fond du Lac
Appleton
Wisconsin Rapids
Stevens Point
Wausau
Rhinelander
Park Falls
Ashland
Superior
Duluth
Eau Claire
Chippewa Falls
La Crosse
Prairie du Chien
Madison
Janesville
Beloit
Racine
Kenosha
Milwaukee
Escanaba
Marinette
Menominee
Iron Mountain
Manistique
Mackinac Island
Traverse City
Grand Rapids
Muskegon
Ludington
Petoskey
Gaylord
Alpena
Bay City
Saginaw
Midland
Mt. Pleasant
Big Rapids
Cadillac
Manistee
Frankfort
Escanaba
Sturgeon Bay
Stevens Point
Wisconsin Rapids
Marshfield
Merrill
Tomahawk
Antigo
Rhinelander
Crystal Falls
Iron River
Ironwood
Hurley
Ashland
Superior
Duluth
Hayward
Spooner
Rice Lake
Menomonie
Hudson
New Richmond
Osceola
Amery
Balsam Lake
Luck
Frederic
Grantsburg
Siren
Webster
Shell Lake
Hayward
Minocqua
Woodruff
Eagle River
Rhinelander
Crandon
Florence
Iron Mountain
Menominee
Marinette
Peshtigo
Oconto
Green Bay
Kewaunee
Two Rivers
Manitowoc
Sheboygan
Port Washington
Cedarburg
West Bend
Hartford
Watertown
Jefferson
Fort Atkinson
Whitewater
Elkhorn
Delavan
Lake Geneva
Burlington
Kenosha
Racine
Waukegan
Evanston
Chicago
Gary
Hammond
Whiting
Michigan City
La Porte
South Bend
Elkhart
Goshen
Benton Harbor
St. Joseph
Kalamazoo
Battle Creek
Jackson
Ann Arbor
Detroit
Toledo
Monroe
Adrian
Coldwater
Hillsdale
Lansing
Owosso
Saginaw
Bay City
Alpena
Gaylord
Petoskey
Mackinaw City
St. Ignace
Sault Ste. Marie
Newberry
Munising
Marquette
Negaunee
Ishpeming
Gladstone
Escanaba
Menominee
Iron Mountain
Crystal Falls
Ironwood
Hurley
Ashland
Superior
Duluth
Grand Marais
Grand Portage
Thunder Bay
Fort William
Port Arthur
Nipigon
Schreiber
Heron Bay
Michipicoten
Sault Ste. Marie
Soo Junction
Trout Lake
Raco
Brimley
Rudyard
Pickford
Kinross
Drummond Island
Cheboygan
Mackinaw City
St. Ignace
Manistique
Gulliver
Seney
Germfask
Shingleton
Munising
Marquette
Negaunee
Ishpeming
Gladstone
Escanaba
Menominee
Marinette
Peshtigo
Oconto
Green Bay
Kewaunee
Two Rivers
Manitowoc
Sheboygan
Port Washington
Milwaukee
Racine
Kenosha
Waukegan
Chicago
Gary
Hammond
Whiting
Michigan City
La Porte
South Bend
Elkhart
Goshen
Benton Harbor
St. Joseph
Kalamazoo
Battle Creek
Jackson
Ann Arbor
Detroit
Toledo
Monroe
Adrian
Coldwater
Hillsdale
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Bay City
Alpena
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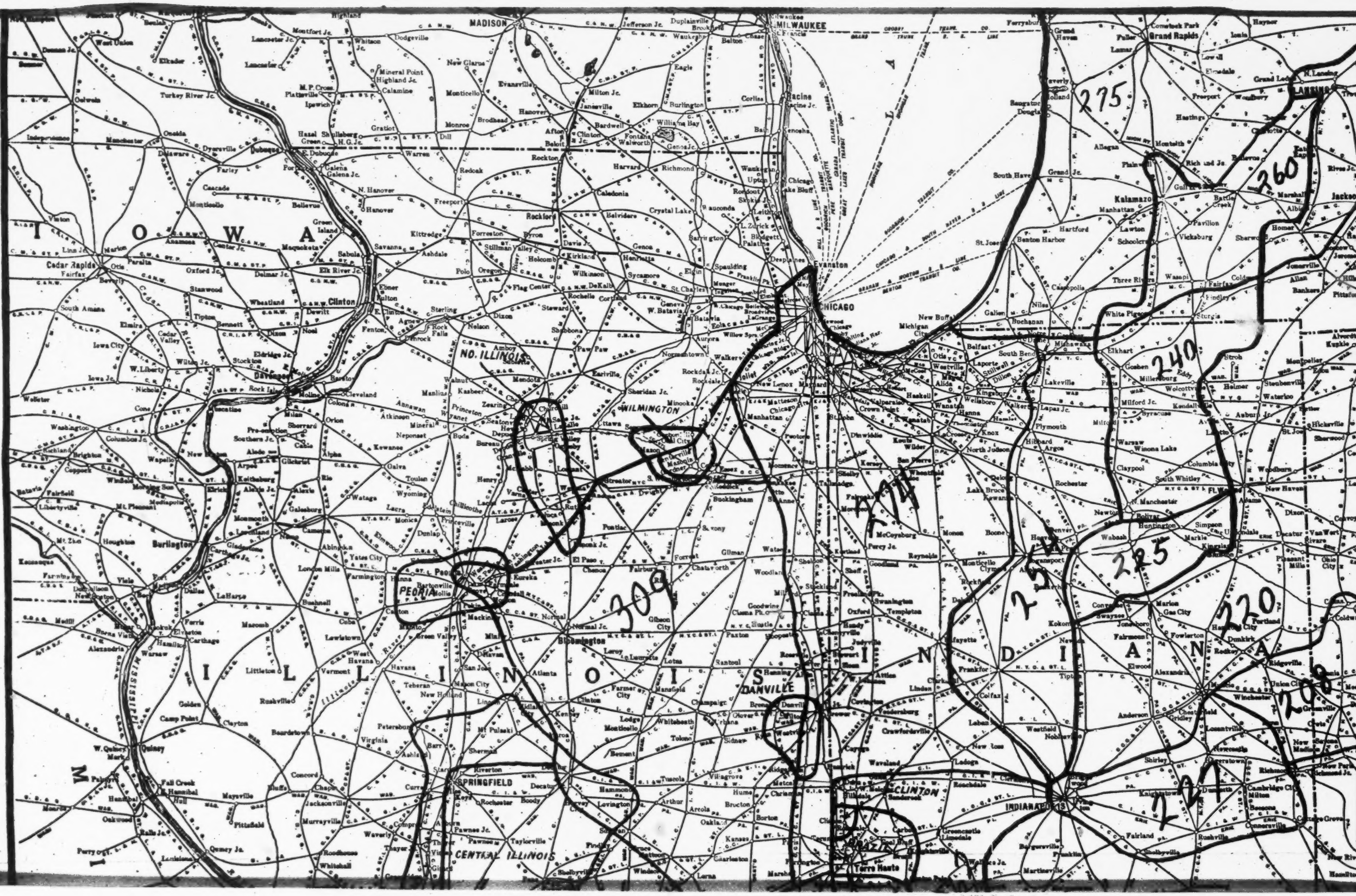
Mackinaw City
St. Ignace
Sault Ste. Marie
Newberry


MADISON
MILWAUKEE
CHICAGO
Evanston
Racine
Kenosha
Waukegan
Rockford
Freeport
Dubuque
E. Dubuque
Galena
Clinton
Davenport
Rock Island
Moline
Cedar Rapids
Iowa City
Burlington
Quincy
PEORIA
SPRINGFIELD
CENTRAL ILLINOIS
NO. ILLINOIS
WILMINGTON
DANVILLE
CLINTON
Terre Haute
INDIANAPOLIS
Kalamazoo
Grand Rapids
Benton Harbor
South Bend
Elkhart
Gary
Hammond
Joliet
Aurora
Elgin
Waukegan
Racine
Kenosha
I O W A
I L L I N O I S
I N D I A N A
MISSISSIPPI
275
360
240
294
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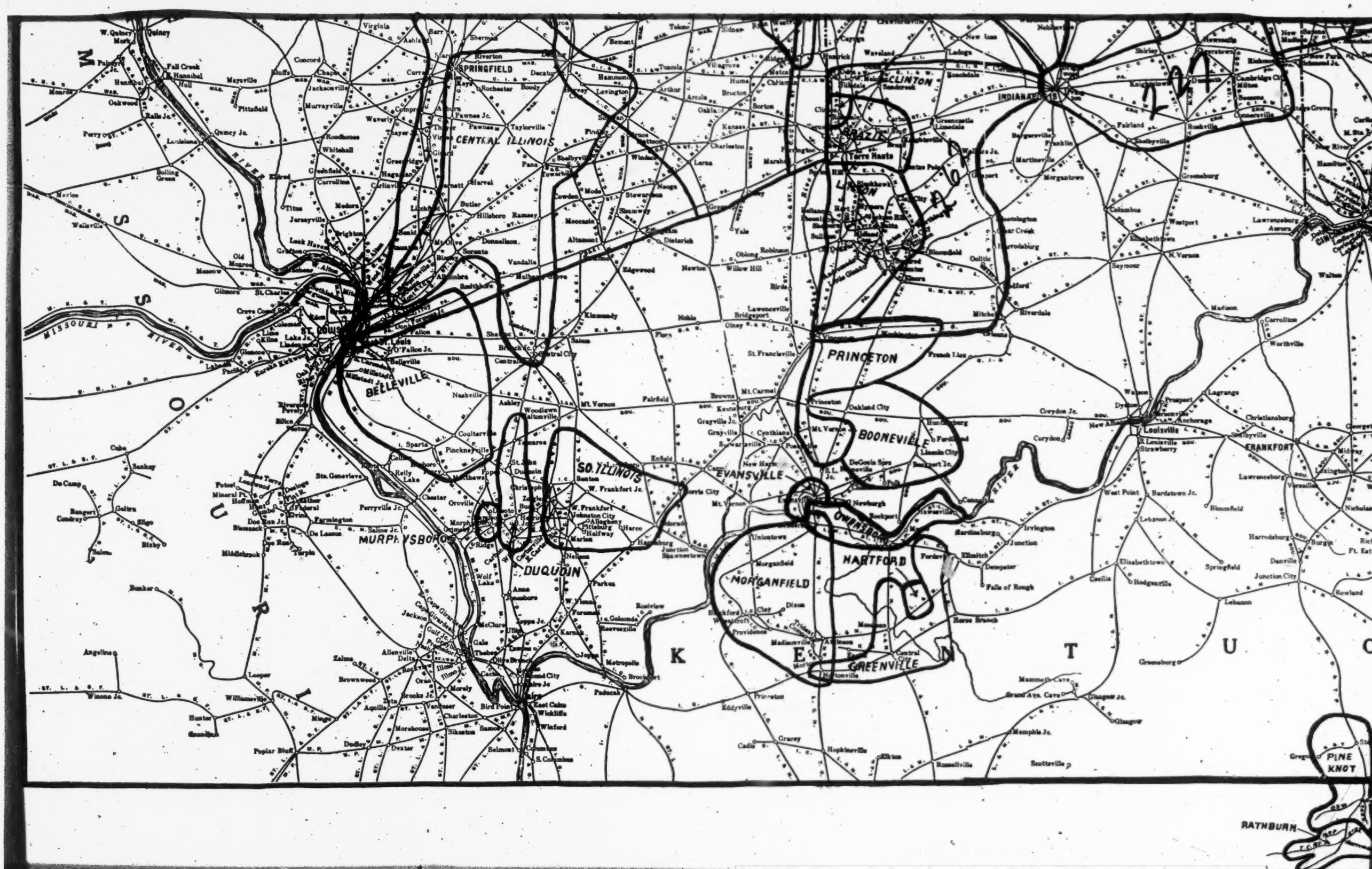
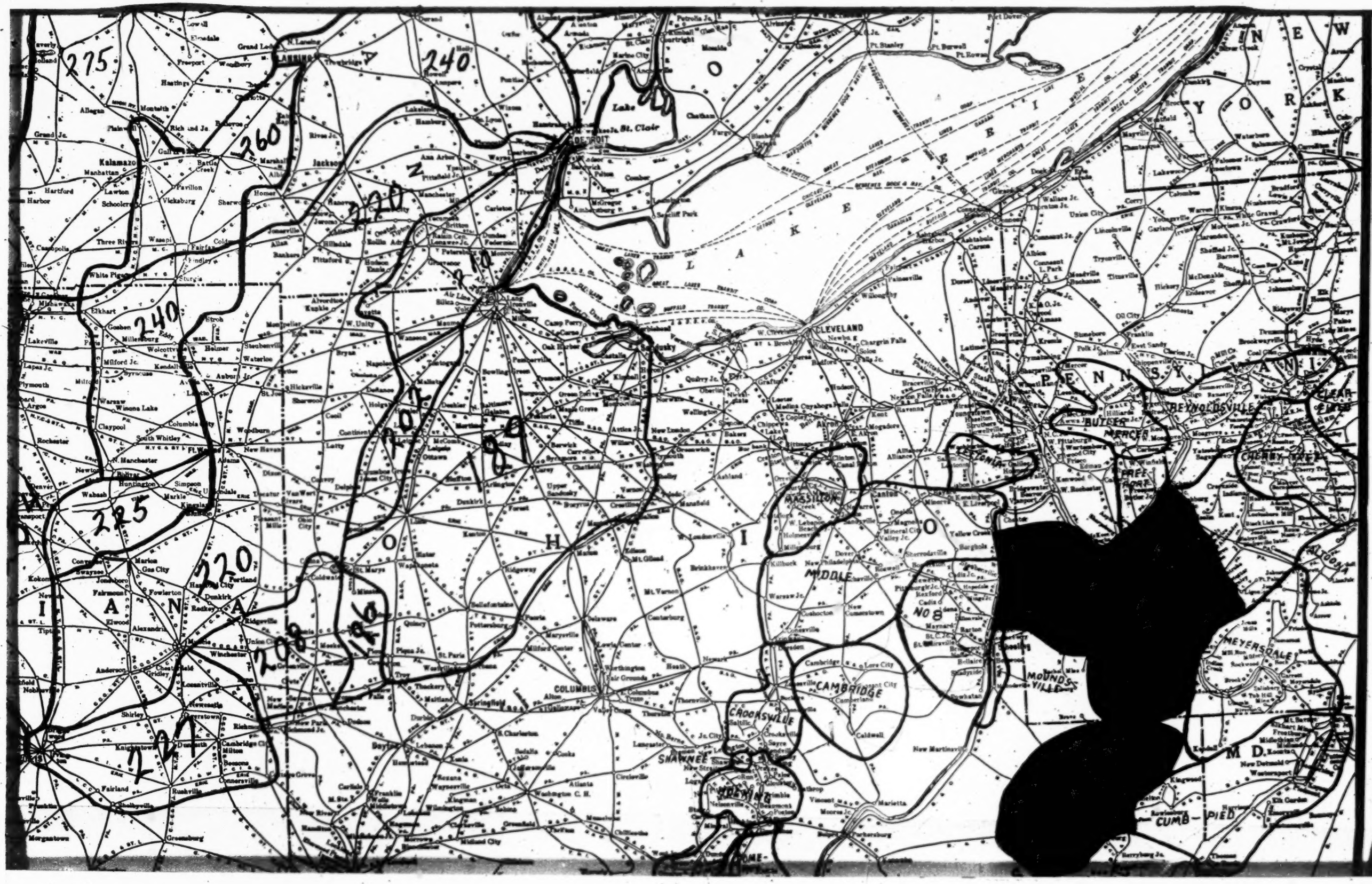

SPRINGFIELD
CENTRAL ILLINOIS
CLINTON
INDIANAPOLIS
Terre Haute
LOGANSPORT
PRINCETON
BOONEVILLE
EVANSVILLE
HARTFORD
OWENSBORO
MORGANFIELD
GREENVILLE
SO. ILLINOIS
DUQUOIN
MURPHYSBORO
BELLEVILLE
ST. LOUIS
FRANKFORT
PINE KNOT
RATHBURN
MISSOURI RIVER
OHIO RIVER
KENTUCKY

Plaintiff's Exhibit No. 53

Drummond Island
Cockburn Island
GRAND MANITOULIN ISLAND
Mackinac Island
St. Ignace
Cheboygan
Sturgeon Bay
Harbor Springs
Petoskey
Charlevoix
Boyne City
Boyne Falls
East Jordan
Elmira
Gaylord
Alpena
Hillman
Johannesburg
Lewiston
Grayling
Roscommon
Curran
Hardy
Lincoln
South Branch
Smith Jc.
Rose City
St. Helen
Tawas
Au Sable
Oscoda
Harrison
Gladwin
Bentley
Mt. Forest
Standish
Au Gres
Saginaw Bay
Port Austin
Sandstone City
Port Hope
Caseville
Port Sanilac
Pigeon
Bad Axe
Owendale
Tyre
Palms
Cass City
Wilmot
Sandusky
Carsonville
Clifford
Deckerville
Otter Lake
Lapeer
Flint
Saginaw
Bay City
Midland
Denmark Jc.
Hoyt
Vassar
Reese
Sheridan
Stanton
Edmore
Howard City
Big Rapids
Barryton
Weldman
Mt. Pleasant
Remus
Mecosta
Farwell
Clare
Pinconning
Auburn
Kawkawlin
Essexville
Williamsburg
Traverse City
Interlochen
Walton Jct.
Kingsley
Cadillac
Manton
Tustin
Pennock
Baldwin
Reed City
Evart
Cedar Springs
Greenville
Sparta
Kent City
Ashley
Alma
Ithaca
Gratiot
Mio
Harrisville
Oscoda
Tawas City
Au Sable
Glennie
Hale
Prescott
Emery Jct.
Foreman
Webber
Lake City
Jeddo
Port Huron
Marysville
Sarnia
Wyoming
Kingscourt
Kenora
Hyde Park
Ingersoll
Norwich Jct.
Woodstock
Brantford
Paris
Galt
Guelph
Guelph Jct.
Elmira
St. Jacobs
Kitchener
Milverton
Listowel
Elora
Fergus
Palmerston
Harriston
Teeswater
Wingham
Blyth
Clinton
Goderich
Stratford
Tavistock Jct.
St. Marys
Drumbo
Harrisburg
Lynden
Dundas
Hamilton
Burlington Jct.
Bartonville
Smithville
Caledonia
Hagersville
Waterford
Jarvis
Port Maitland
Dunnville
Canfield
Wellandport
Fort Erie
Niagara Falls
Niagara-on-the-Lake
Port Dalhousie
Merritton
Thorold
Welland
Port Colborne
Lockport
N. Tonawanda
Tonawanda
Akron Jct.
Depew
Buffalo
Attica
Batavia
Rochester
Lyons
Clyde
Weedsport
Auburn
Syracuse
Oswego
Fulton
Phoenix
Oneida
Rome
Utica
Little Falls
Herkimer
Mohawk
Schenectady
Albany
Troy
Rensselaer
Hudson
Poughkeepsie
Newburgh
Port Jervis
Middletown
Binghamton
Elmira
Corning
Hornell
Wellsville
Olean
Salamanca
Jamestown
Dunkirk
Erie
Meadville
Titusville
Oil City
Franklin
Warren
Kane
Bradford
Kinzua
Ridgway
Brockport
Albion
Medina
Lockport
Suspension Bridge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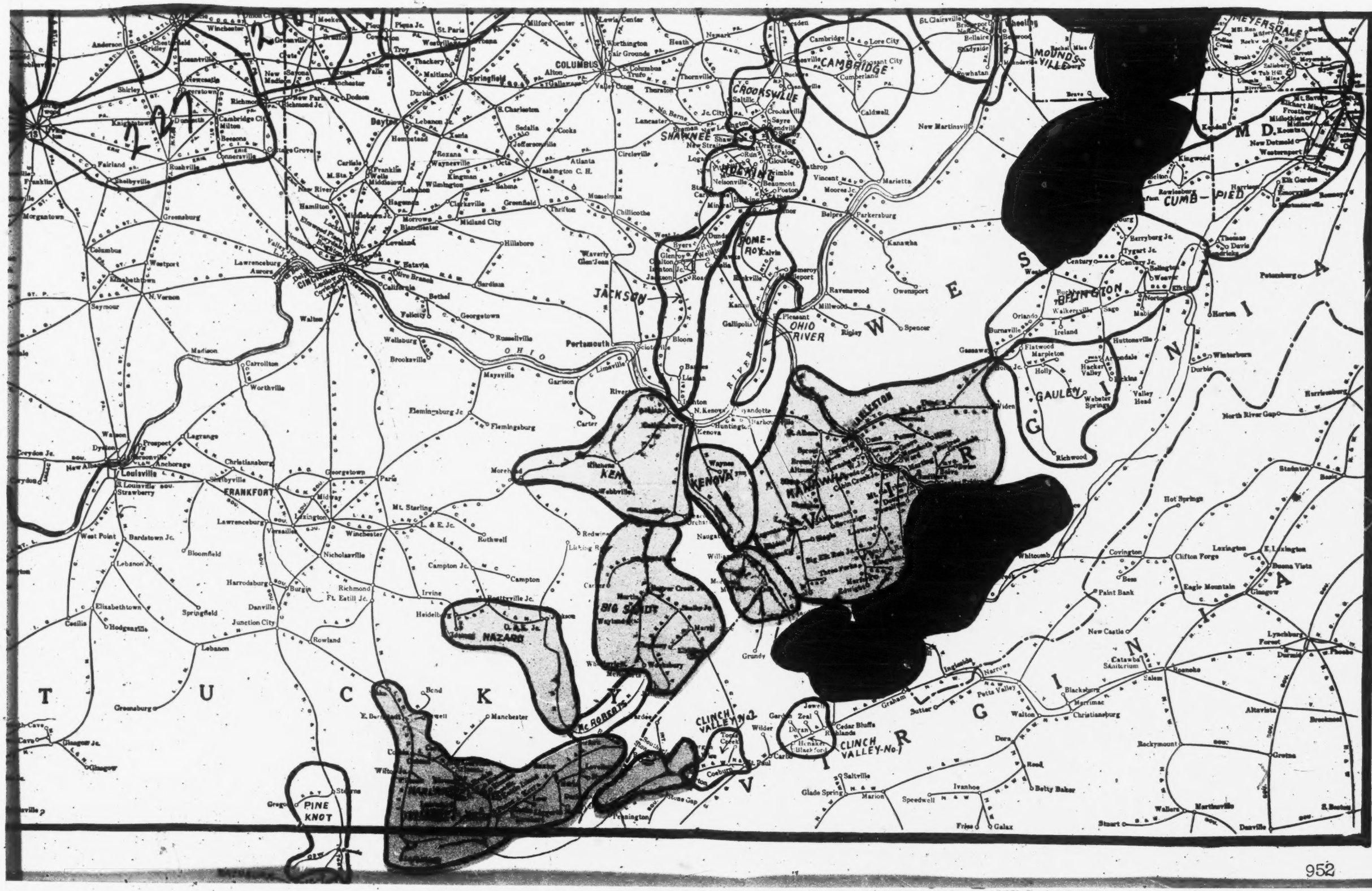
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Brevard
Saluda
Tryon
Landrum
Greenville
Spartanburg
Union
Gaffney
Blacksburg
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Shelby
Rutherfordton
Forest City
Spindale
Rutherfordton
Bostic
Ellenboro
Caroleen
Mooresboro
Henrietta
Rutherfordton
Spindale
Forest City

[fol. 953]

PLAINTIFF'S EXHIBIT 54

Freight Rates from Various Coal Producing Fields to Illinois—Indiana—Michigan Points

From:— (Districts)	Pocahontas-Tug River (Norfolk & Western)	Pittsburgh-Connellsville Fairmont (Baltimore & Ohio RR) (Pennsylvania RR)	Kenova-Thacker (Norfolk & Westn)	Kanawha-Kentucky Big Sandy (Chesapeake & Ohio)
To:—				
Illinois-Indiana				
Chicago Group Chicago, Ill. E. Chicago, Ind. Gary, Ind. Hammond, Ind. Lafayette, Ind. Michigan City, Ind.	3.29(1)	3.09(2)	3.09(1)	3.09(3)
Indianapolis, Ind	2.62(1)	2.52(2)	2.52(1)	2.52(3)
Kokomo Group Anderson, Ind. Kokomo, Ind. Muncie, Ind. Ft. Wayne, Ind.	2.95(1)	2.70(2)	2.70(1)	2.70(1)
South Bend, Ind	3.29(1)	3.04(2)	3.04(1)	3.04(3)
Michigan:				
Detroit Group Detroit Highland Park Wyandotte	2.85(1)	2.60(2)	2.60(1)	2.60(3)
Ann Arbor Group Ann Arbor Dearborn Jackson	2.95(1)	2.70(2)	2.70(1)	2.70(3)

PLAINTIFF'S EXHIBIT 54—Continued

From:— (Districts)	Pocahontas-Tug River (Norfolk & Western)	Pittsburgh-Connellsville Fairmont (Baltimore & Ohio RR) (Pennsylvania RR)	Kenova-Thacker (Norfolk & Westn)	Kanawha-Kentucky Big Sandy (Chesapeake & Ohio)
To:—				
Lansing Group Flint Lansing Pontiac Port Huron	3.15(1)	2.90(2)	2.90(1)	2.90(3)
[fol. 954]				
Kalamazoo Group Battle Creek Kalamazoo	3.35(1)	3.10(2)	3.10(2)	3.10(3)
Grand Rapids Group Bay City Grand Rapids Muskegon Saginaw	3.50(1)	3.25(2)	3.25(1)	3.25(3)

Tariff Authority:—

(1) N & W 3140–B, 3/5/32
(2) (B & O C & C ICC-2763, 3/15/33
(PRR AA-ICC–2035, 2/18/24
(3) C & O 100–F, ICC–11138, 3/26/31.

[fol. 955]

PLAINTIFF'S EXHIBIT 55

Freight Rates from Various Coal Producing Fields to Ohio Points

From: (Districts)	Pocahontas-Tug River (Norfolk & Western)	Pittsburgh (Baltimore & Ohio RR) (Pennsylvania RR)	Connellsville (Baltimore & Ohio) (Pennsylvania RR)	Fairmont (Baltimore & Ohio) (Pennsylvania RR)	Kenova-Thacker (Nor. & Western)	Kanawha-Kentucky Big Sandy (Ches. & Ohio)
To:						
Canton.....	2.64(1)	1.59(2)	1.65(2)	1.84*(2)	2.39(1)	2.39(3)
Cleveland....	2.64(1)	1.84(2)	1.90(2)	1.99(2)	2.39(1)	2.39(3)
Massillon....	2.64(1)	1.59(2)	1.65(2)	1.87#(2)	2.39(1)	2.39(3)
Youngstown..	2.64(1)	1.34(2)	1.42(2)	1.58(2)	2.39(1).	2.39(3)

References:—

* $1.82 from Fairmont No. 1 on the Baltimore & Ohio RR—$1.87 via P. R. R.
\# $1.65 from Fairmont No. 1 on the Baltimore & Ohio RR.

Tariff Authority:—

(1) N & W 3140-B, 3/5/32.
(2) (B & O, C & C, ICC-2763, 3/15/33.
(PRR, AA ICC-2035, 2/18/24.
(3) C & O, 100-F, ICC-11138, 3/26/31.

(Here follows Plaintiff's Exhibit 56, folio 956.)

[fol. 956]

PLAINTIFF'S EXHIBIT 55

Freight Rates from Various Coal Producing Fields to Lake Cargo Points

From— (Districts)	Pocahontas-Tug River (Norfolk & Western)	Thacker-Kenova (Nor. & Western)	Kanawha-Kentucky-Big Sandy (Ches. & Ohio)	Pittsburgh (Balt. & Ohio RR) (Penn. R. R.)	Connellsville (Balt. & Ohio RR) (Penn. R. R.)	Fairmont (Balt. & Ohio RR) (Penn. R. R.)	Jellico-Hazard (L & N RR)
To—							
Sandusky, Ohio	1.96 (1)	1.81 (1)	1.81 (2)	1.46 (3)	1.54 (3)	1.66 (3)	1.81 (4)
Toledo, Ohio	1.96 (1)	1.81 (1)	1.81 (2)	....	....	....	1.81 (4)
Cleveland, Ohio	....	....	....	1.46 (5)	1.54 (5)	1.66 (5)	.....
Ashtabula, Ohio	....	....	....	1.46 (5)	1.54 (5)	1.66 (5)	....
Erie, Pa.	....	....	....	1.46 (5)	1.54 (5)	1.66 (5)	....

Tariff Authority—

(1) N & W 3141–B, 4/1/32
(2) C & O 17–T, ICC 10436, 12/28/27
(3) B & O C & C, ICC 2800, 7/15/35
(4) L & N 234–C, ICC A–16223, 2/15/35
(5) P RR AA ICC 1334, 8/15/19

[fol. 957] PLAINTIFF'S EXHIBIT 57

Comparison Between Coal Fields and Districts Under Code

Coal Producing Fields	Districts Under the Bituminous Coal Code (Pursuant to the Conservation Act of 1935)
Big Sandy	Southern No. 2—District No. 8
Connellsville	Western Penna.—District No. 2
Fairmont	Northern W. Va.—District No. 3
Hazard	Southern No. 2—District No. 8
Jellico	Southern No. 2—District No. 8
Kanawha	Southern No. 2—District No. 8
Kenova	Southern No. 2—District No. 8
Kentucky	Southern No. 2—District No. 8
New River	Southern No. 1—District No. 7
Pittsburgh	Western Penna.—District No. 2
Pocahontas	Southern No. 1—District No. 7
Stonega	Southern No. 2—District No. 8
Thacker	Southern No. 2—District No. 8
Tug River	Southern No. 1—District No. 7

[fol. 958] PLAINTIFF'S EXHIBIT 58

Total Delivered Cost of Bituminous Coal Purchased by Class I Railroads in the United States and Average Cost Per Net Ton

(Source: Interstate Commerce Commission)

Year	Net tons purchased	Total cost delivered(1)	Average delivered cost per net ton
1919(2)	123,907,508	$390,036,556	$3.148
1920(2)	155,343,635	641,224,469	4.128
1921	(3)	(3)	(3)
1922(4)	120,653,624	473,609,014	3.925
1923(4)	157,899,918	534,028,691	3.382
1924(4)	126,340,181	372,030,966	2.945
1925(4)	131,451,834	348,891,293	2.654
1926(4)	139,602,076	366,234,326	2.623
1927(4)	130,606,152	341,600,900	2.616
1928(4)	119,820,194	298,013,894	2.487
1929(4)	124,151,763	292,131,298	2.353
1930(4)	108,651,420	247,696,815	2.280
1931(4)	91,135,583	197,382,901	2.166
1932(4)	74,670,282	149,327,909	2.000
1933(4)	75,486,947	146,833,684	1.95
1934(4)	79,493,809	175,179,542	2.20

(1) Including transportation charges paid foreign lines. (2) From a special investigation in Docket 12086, Increased Cost of Railroad Fuel, 1920, Report of the Commission of the Senate to the United States in Response to Senate Resolution No. 412, published in Interstate Commerce Commission Reports, Volume 61, p. 761–763. Details are given in an accompanying exhibit. (3) Separate data on bituminous and anthracite purchases were not available for 1921. (4) Data for 1922 to 1934 from Interstate Commerce Commission Statistics of Railways in the United States, Statement Number 49-A. Represents Class I Steam Railways excluding switching and terminal companies.

Compiled by F. G. Tryon, Coal Economics Division, U. S. Bureau of Mines.

Approved Code No. 24—Reprint Registry No. 702—45

NATIONAL RECOVERY ADMINISTRATION

CODE OF FAIR COMPETITION

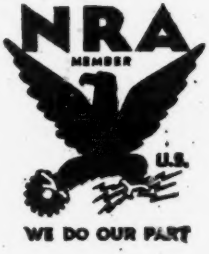
FOR THE

BITUMINOUS COAL INDUSTRY

AS APPROVED ON SEPTEMBER 18, 1933

BY

PRESIDENT ROOSEVELT



INCLUDES AMENDMENTS 1-3, INCL.

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON: 1934

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Approved Code No. 24

CODE OF FAIR COMPETITION

FOR THE

BITUMINOUS COAL INDUSTRY

As Approved on September 18, 1933

BY

PRESIDENT ROOSEVELT

Executive Order

An application having been duly made, pursuant to and in full compliance with the provisions of Title I of the National Industrial Recovery Act, approved June 16, 1933, for my approval of a Code of Fair Competition for the Bituminous Coal Industry, and hearings having been held thereon and the Administrator having rendered his report containing an analysis of the said Code of Fair Competition together with his recommendations and findings with respect thereto, and the Administrator having found that the said Code of Fair Competition complies in all respects with the pertinent provisions of Title I of said Act and that the requirements of clauses (1) and (2) of subsection (a) of Section 3 of the said Act have been met:

NOW, THEREFORE, I, Franklin D. Roosevelt, President of the United States, pursuant to the authority vested in me by Title I of the National Industrial Recovery Act, approved June 16, 1933, and otherwise, do adopt and approve the report, recommendations, and findings of the Administrator and do order that the said Code of Fair Competition be and is hereby approved, subject to the following conditions:

(1) There shall be added to the first paragraph of Section 3 of Article VII of the Code the following sentence:

> All coal producers subject to the Code shall furnish to any government agency or agencies designated by the Administrator such statistical information as the Administrator may, from time to time, deem necessary for the purposes recited in Section 3 (a) of the National Industrial Recovery Act and any reports and other information collected and compiled by a Code Authority, as heretofore provided, shall be transmitted to such government agencies, as the Administrator may direct.

(2) There shall be added after the first sentence of Section 4 of Article VII the following sentence:

The President may appoint not more than three members of the Industrial Board in addition to, or in substitution for one or more of, the aforesaid six members of the Divisional Code Authorities.

(3) Schedule A as attached to the Code recommended by the Administrator is approved with the understanding that any basic minimum rates not fixed therein may be approved or prescribed by the President at any time prior to the effective date of this Code by a supplementary Executive Order.

(4) Because it is evident that attempts by those submitting Codes to interpret Section 7 (a) of the National Industrial Recovery Act have led to confusion and misunderstanding, such interpretations should not be incorporated in Codes of Fair Competition. Therefore, paragraph (b) of Article V must be eliminated without, by this exclusion, indicating disapproval in any way of the joint statement of the Administrator and General Counsel of the National Recovery Administration, which has been attached to the Code as Schedule B and was incorporated by reference in said paragraph (b) of Article V.

(5) The exception to the definition of "employee" in Article II belongs in Article III. Accordingly, the words "except members of the executive, supervisory, technical and confidential personnel" are stricken from the third paragraph of Article II. These same words are inserted in the first paragraph of Article III after the words "no employee."

FRANKLIN D. ROOSEVELT.

Approval recommended:
HUGH S. JOHNSON,
Administrator.

THE WHITE HOUSE,
September 18, 1933.

SEPTEMBER 17, 1933.

General HUGH S. JOHNSON,
Administrator, National Recovery Administration,
Washington, D.C.

DEAR SIR: I present herewith for your consideration and recommendation to the President the Code of Fair Competition for the Bituminous Coal Industry.

Efforts were under way to secure the cooperation of the Bituminous Coal operators prior to and in anticipation of the passage of the National Industrial Recovery Act.

The state of utter disorganization in the industry involving the prevalence of unfair competitive practices, particularly in the payment of low wages in order to permit of unreasonably low coal prices, furnished a good example of the effects of unrestrained competition in an industry capable of great overproduction in relation to existing consumer demands. In numerous ways the Bituminous Coal Industry has furnished more convincing evidence of the need for the integrating force of the National Industrial Recovery Act than any other industry in the nation.

The initial and immediate activity of the Administrator and the present writer after your appointment was an effort to bring about a greater coordination and cooperation between the operators in the different sections of the country in this industry and largely in response to this effort there came into being the Northern Coal Control Association and the Smokeless Appalachian Coal Association, representing almost all producers in the Appalachian coal area which produces approximately 70% of the national Bituminous coal tonnage. These associations join in presenting a Code of Fair Competition, this being a remarkable exhibition of cooperation among coal producers who have been engaged for a generation in bitter competitive operations. Other associations in various regions presented separate Codes as did certain groups of individual producers thus offered to the Administration the problem of harmonizing in some manner the divergent views represented in some twenty-eight different Codes.

This industry also presented the unique problem of one in which there was far-reaching organization of labor on an industrial basis, The United Mine Workers of America having contracts with many operators in many fields and claiming organization of workers in many other fields where no contractual relations existed.

The difficulty of reconciling all the conflicting elements in this situation can hardly be overemphasized. During the progress of discussion following the public hearings representatives of the Appalachian Associations requested the aid of the Administration in facilitating the negotiation of a contract between these associations and the United Mine Workers of America, and it was evident to the Administration that this step having been taken a successful conclusion to these negotiations was of the utmost importance in bringing about the submission of a code for the industry as a whole.

In the detailed report which will be prepared for your consideration all the steps taken and the problems involved will be given more

adequate consideration. At the present time in view of the urgent need for the recommendation and approval of the code which was finally adopted and submitted for approval on September 16 by representatives of approximately 95 percent of the national tonnage, it is desirable to make recommendations only as to the following minor details:

1. There is a provision in Article VII, section 3, requiring each code authority to collect and combine any report and other information required under the National Industrial Recovery Act. This should be supplemented by a definite obligation imposed upon the industry to furnish to government agencies such statistical information as the administrator may deem necessary for the purposes recited in Section 3-A of the National Industrial Recovery Act in the form of an Executive Order to be recommended to the President. An appropriate provision will be drafted to cover these requirements.

2. In Article VII, Section 4, provision is made for establishing an Industrial board to consist of nine members designated by the several divisional code authorities and the six members of the divisional authorities who have been appointed by the President. It appears that the provision as written may unduly restrict the President in placing on the Industrial Board only his appointees to the divisional code authorities.

Accordingly, it is recommended that as a condition of approval the President reserve the right to name not more than three members either in substitution for, or in addition to the six presidential appointees made members of the Industrial Board by the present provision of Section 4, of Article VII.

3. Schedule A fixes basic minimum rates for various districts and parts thereof leaving the rates for certain producing areas to be either approved or prescribed by the President prior to the effective date of the code. In view of progress made since the submission of the code in determining those rates not fixed in schedule A as submitted, I am able to recommend the revised Schedule A attached to this report, and desire to make it plain that no rates as fixed in Schedule A as submitted have been changed.

The code as recommended complies in all respects with the pertinent provisions of Title I of the Act. The groups submitting the code impose no inequitable restrictions on admission to membership therein and were truly representative of the Bituminous Industry.

The code as recommended is not designed to promote monopolies or to eliminate or oppress small enterprises and will not operate to discriminate against them, and will tend to effectuate the policy of Title I of the National Industrial Recovery Act.

From evidence adduced during the hearing and all available information, it is believed that this code as now proposed and revised represents an effective, practical, equitable solution for this industry, and its approval as herewith submitted is recommended.

Respectfully submitted.

K. M. SIMPSON,
Deputy Administrator.

Approved:
HUGH S. JOHNSON,
Administrator.

CODE OF FAIR COMPETITION

FOR THE

BITUMINOUS COAL INDUSTRY

ARTICLE I—PURPOSES

To effectuate the policies of Title I of the National Industrial Recovery Act, the following provisions are submitted as a Code of Fair Competition for the bituminous-coal industry and upon approval by the President shall be the standards of fair competition for this Industry.

ARTICLE II—DEFINITIONS

As used in this Code the term "Industry" as applied to the Bituminous Coal Industry means the production and original sale of all kinds of coal (except anthracite), lignite, and the production and original sale of coke other than byproduct coke.

The term "employer" includes any person employing labor in any phase of the industry.

The term "employee" includes all persons employed in the industry.

The term "Administrator" means the official designated by the President to administer the National Industrial Recovery Act.

ARTICLE III—MAXIMUM HOURS OF LABOR

No employee, except members of the executive, supervisory, clerical, technical and confidential personnel, shall be employed in excess of seven hours per day and five days per week, subject to the exceptions hereinafter stated.

Seven hours of labor shall constitute a day's work and this means seven hours work at the usual working places for all classes of labor, exclusive of the lunch period, whether they be paid on the day or the tonnage or other piecework basis; except in cases of accident which temporarily necessitate longer hours for those required on account thereof; and also excepting that number of workers in each mine whose daily work includes the handling of man-trips and those required to remain on duty while men are entering and leaving the mine.

The following classes of mine workers are exempted from the provisions as to the maximum hours of work:

(a) *All workers engaged in the transportation of coal shall work the additional time necessary to handle man-trips, and/or haulage animals, and all coal in transit, and shall be paid the regular hourly rates. Mine workers engaged in the dumping, handling and preparation of coal, and in the manufacture of coke, shall work the additional time necessary, not to exceed thirty minutes, to dump and prepare the coal delivered to the tipple each day and to complete the usual duties incidental to the operation of coke ovens, and shall be paid the regular hourly rates. This*

rule shall not encourage the working of such overtime except where it is necessary to take care of the conditions named.

(b) Employees engaged at power houses, substations and pumps operating continuously for 24 hours daily are especially exempted from the seven-hour provision. Special exemptions of employees other than those named above may be provided, by joint agreements negotiated in accordance with this code, which shall not provide for work in excess of 8 hours per day and 40 hours per week.[1]

Article IV—Minimum Rates of Pay

From April 1, 1934 to April 1, 1935 the basic minimum rate for inside skilled labor and the basic minimum rate for outside common labor shall be the rate hereinafter set forth in Schedule "A" for each district therein described for each such classification of labor, with the understanding that other classifications of employment will maintain their customary differentials above or below said basic minimum rate.

To secure the parity between minimum rates for day labor and minimum pay for work performed on a tonnage or other piece work basis the latter shall be determined by the following increases over existing rates in all of the Districts of Schedule "A" except as hereinafter expressly provided:

On the basis of the 2,000 pound ton, an increase of 10 cents per ton for pick mining; 8 cents per ton for machine mining; an increase of 1 cent per ton for cutting, and for all yardage and dead-work rates an increase of 9 percent.

In addition to the increases above provided the minimum rates for tonnage and other piecework in Districts B, G, H, J and J-1, shall be further increased by an amount sufficient to maintain the parity between pay for such tonnage and piece work and the basic minimum rates for day labor as prescribed for such Districts in Schedule "A".[2]

Article V—Conditions of Employment

(a) Employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection; (2) no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing, or assisting a labor organization of his own choosing; and (3) employers shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment approved or prescribed by the President.

(b) Except as otherwise hereinafter provided, all coal mined on a tonnage basis shall be weighed and the miner paid on the basis of 2,000 or 2,240 pound ton. The miners shall have the right to a checkweighman, of their own choosing, to inspect the weighing of coal. *Provided*, that where mines are not now equipped to weigh coal a reasonable time may be allowed to so equip such mines; and pro-

[1] *Amendment No. 1.—Approved Mar. 31, 1934.*
[2] *Amendment No. 1.—Approved Mar. 31, 1934.*

vided, that in any case where rates of pay are based on any other method than on actual weights, the miners shall have the right to check the accuracy and fairness of the application of such methods, by representatives of their own choosing.

(c) The net amount of wages due shall be paid semimonthly in lawful money or par check at the option of operators. Any deductions from employees' pay, if not a matter of agreement, shall be in conformity with such general rules and regulations as the Administrator may prescribe for the purpose of preventing unfair deductions, or those which may in effect lower the rates of pay herein provided.

(d) Employees other than maintenance or supervisory men or those necessary to protect the property shall not be required as a condition of employment to live in homes rented from the employer.

(e) No employee shall be required as a condition of employment to trade at the store of the employer.

(f) No person under seventeen (17) years of age shall be employed inside any mine or in hazardous occupations outside any mine, provided, however, that where a state law provides a higher minimum age, the state law shall govern; no person under the age of sixteen (16) shall be employed in or about a mine.

(g) As soon as possible after the adoption of this Code, the National Recovery Administration shall undertake, through a designated committee or agency, an investigation for the purpose of reporting on or before December 31, 1933; upon (a) the practicability and cost (assuming the maintenance of existing rates of pay) of applying to bituminous coal mining a shorter work day and work week; (b) the effect of an advisability of revising wage differentials in the various divisions and districts of the industry and in the event of recommended change specification of the amount thereof; (c) the sales obtained for coal, or reasonably to be anticipated, up to the time of the report, for the purpose of determining whether wages and employment can be further increased or maintained without imposing undue burdens upon the industry.

On January 5, 1934, there shall be held a conference between representatives of employers and employees operating under this Code, together with representatives of the National Recovery Administration, for the purpose of determining what, if any, revisions may be desirable at that time of the wages, hours, and differentials, or any other requirements of this Code, on the basis of conditions then existing and the report of representatives of the National Recovery Administration made as hereinbefore provided.

Unless revised by mutual agreement, as the result of said conference beginning January 5, 1934, the hours of work, minimum rates of pay, and wage differentials as set forth in this Code shall continue in effect until April 1, 1934.

Article VI—Unfair Practices

Section 1. The selling of coal under a fair market price (necessary to carry out the purposes of the National Industrial Recovery Act, to pay the minimum rates herein established, and to furnish employment for labor) is hereby declared to be an unfair competitive practice and in violation of this Code. In order to determine the fair market price, agencies shall be established, as hereinafter provided,

and sales of coal at any time at a price less than a fair market price determined and published, as hereinafter provided, shall create against any person selling at a lower price a prima facie presumption that such a person is engaged in destructive price cutting and unfair competition. It shall be proper in determining such fair market price to take into consideration, in addition to the matters above set forth, also competition with other coals, fuels, and forms of energy or heat production.

SEC. 2. The fair market prices of coal of any grade and character referred to in the next preceding section, subject to the power of review hereinafter stated shall be—

(a) The minimum prices for the various grades and sizes in the various consuming markets which may be established for future application by a marketing agency or by marketing agencies, of whatever form or howsoever constituted, now existing or hereafter created or organized, acting for coal producers truly representative of at least two thirds of the commercial tonnage of any coal district or group of districts, such minimum prices to be effective when and as announced as provided in Section 4 hereof.

(b) The minimum prices for the various grades and sizes in the various consuming markets, where no such marketing agency exists, which may be established for future application by the respective Code Authorities hereinafter set up, for their respective areas, after having given consideration to the various conditions and circumstances entering into the sale of each grade and class of commercial coal produced in the district or group of districts it represents, such minimum prices to be effective when announced as provided in Section 4 hereof.

(c) As a basis for determining the fair market price to be announced and published, as provided in the two preceding clauses, the Code Authorities shall utilize the Classifications of coals made by such agencies as are referred to in clause (a) of this section, and shall classify the coals in said districts not sold by such agencies and also the coals in the districts referred to in clause (b) of this section, to which the various prices apply. Said Code Authorities shall, at all times, provide and keep open an office during business hours to which any coal producer in said districts and any representative of the Administrator may apply for information with respect to said classifications and prices.

(d) The term "marketing agency" or "agency" as used in this Article shall include any trade association of coal producers complying with the requirements of a marketing agency and exercising the functions thereof.

SEC. 3. The fair market prices established for future application under the provisions of Section 2 (a) shall be reported to said Code Authorities by any such marketing agencies in such manner as may be required by such Authorities.

SEC. 4. The fair market price of bituminous coal, established as aforesaid by such agencies and Code Authorities shall be published within fifteen days after the effective date of this Code, after approval by the Presidential Member of the Code Authority (acting under the direction of the Administrator), who in his approval may permit a reduction or increase in said prices by action of said agencies or Authorities within the limits which he may prescribe, and thereafter

shall be published whenever any change is made therein, and not less frequently than one each month, and on the first of the month. Simultaneously with such publication, said fair market prices of bituminous coal shall be transmitted by the Code Authorities to the National Recovery Administrator for his further review and subsequent action.

SEC. 5. Both the records and the data of such marketing agencies and of said Code Authorities shall be open to inspection and investigation by any agent of the Administrator whom he shall appoint for that purpose. Should such an agent of the Administrator disapprove of any changes proposed in any fair market prices from those previously approved by the Administrator as being in excess of any reductions or increases allowed in such approval, such changes shall not be made effective unless and until the Administrator shall approve them.

SEC. 6. The consignment of unordered coal, or the forwarding of coal which has not actually been sold, consigned to the producer or his agent, is a violation of this code; provided, however, that coal which has not actually been sold may be forwarded, consigned to the producer or his agent at rail or truck yards, tidewater ports, river ports, or lake ports, and/or docks beyond such ports, but such consignments shall be limited to cover:

(a) Bunker coal;
(b) Coal applicable against existing contracts;
(c) Coal for storage (other than in railroad cars) by the producer or his agent in rail or truck yards or on docks, wharves, or other yards for resale by the producer or his agent.

SEC. 7. The adjustment of claims with purchasers of coal in such manner as to grant secret allowances, secret rebates, or secret concessions creates price discrimination and is a violation of this Code.

SEC. 8. The prepayment of freight charges with intent or with the effect of granting a discriminatory credit allowance is a violation of this Code.

SEC. 9. The giving in any form of adjustments, allowances, discounts, credits, or refunds to purchasers or sellers of coal, for the purpose or with the effect of altering retroactively a price previously agreed upon in such manner as to create price discrimination is a violation of this Code.

SEC. 10. The predating or the postdating of any invoice or contract for the purchase or sale of coal, except to conform to a bona fide agreement for the purchase or sale entered into on the predate is a violation of this Code.

SEC. 11. Terms of sale shall be strictly adhered to; and the payment or allowance of rebates, refunds, credits, or unearned discounts, whether in the form of money or otherwise, or extending to certain purchasers services or privileges not extended to all purchasers under like terms and conditions, is a violation of this Code.

SEC. 12. An attempt to purchase business, or obtain information concerning a competitor's business by gifts or bribes, is a violation of this Code.

SEC. 13. The intentional misrepresentation of analysis and/or sizes or the intentional making, causing or permitting to be made, or

publishing, of any false, untrue, misleading, or deceptive, statement, by way of advertising, invoice, or otherwise, concerning the size, quality, character, nature, preparation or origin of any coal, bought or sold, is a violation of this Code.

SEC. 14. The unauthorized use, either in written or oral form, of trade marks, trade names, slogans, or advertising matter already adopted by a competitor, or deceptive approximation thereof, is a violation of this Code.

SEC. 15. Inducing or attempting to induce, by any means or device whatsoever, a breach of contract between a competitor and his customer during the term of such contract, is a violation of this Code.

SEC. 16. Nothing in the foregoing sections of this Article shall prevent any American producer from creating special prices for overseas exports.

SEC. 17. The splitting or dividing of commissions, brokers fees, or brokerage discounts, or otherwise in any manner through sham or indirection the use of brokerage commission or jobbers arrangements or sales agency for making discounts, allowances, or rebates, or prices other than those determined as provided in this Code, to any industrial consumer or to any retailer, or to others, shall be a violation of this Code.

SEC. 18. To sell to, or through, any broker, jobber, commission account, or sales agency, which is in fact an agent for an organization of retailers or industrial consumers, whereby they secure indirectly a discount, dividend, allowance or rebates, or a price other than that determined as provided in this Code shall be a violation of this Code.

ARTICLE VII—ADMINISTRATION

SECTION 1. For the purposes of Administration of this Code, the Bituminous Coal Industry is hereby divided into five divisions as follows:

Division No. I.—Pennsylvania, Ohio, Lower Peninsula of Michigan, Maryland, West Virginia, Kentucky, Northern Tennessee, (including all counties not included within Division No. III), Virginia and North Carolina.

Division No. II.—Iowa, Indiana, and Illinois.

Division No. III.—Alabama, Southern Tennessee, (including Marion, Grundy, Sequatchie, White, Hamilton, Bledsoe and Rhea Counties), and Georgia.

Division No. IV.—Missouri, Kansas, Arkansas, Oklahoma, and Texas.

Division No. V.—New Mexico, Colorado, Utah, Wyoming, North Dakota, South Dakota, Montana, Idaho, Washington, Oregon, California, Nevada and Arizona.

In each of the foregoing five divisions, subdivisions may be established, as hereinafter provided.

SEC. 2. *Divisional Code Authorities.*—For each of the foregoing divisions there shall be established within ten days after the effective date hereof, or within such further time as may be permitted by the Administrator, a Divisional Code Authority, or Subdivisional Code Authorities for the administration of this Code within such division, either for the division as a unit, or for subdivisions thereof, respectively, as may be determined. All the members of a Code Authority, except one (without vote and to be appointed by the President) shall be

selected by an association or associations, or a committee of coal producers within the division or subdivision which shall be truly representative of the industry therein and impose no inequitable restrictions on admission to membership. A full report of any such action taken to establish a Code Authority shall be made to the Administrator and shall become effective upon approval by him. A subdivision shall consist of a geographical area within which all coal producers shall be entitled to membership in the association or committee establishing the Code Authority. The Administrator shall have power to limit the number of subdivisions within a division and to determine any controversy arising in the establishment of such a Code Authority, and his decision shall be conclusive as to compliance with the requirements of this Section and of the National Industrial Recovery Act in the initial establishment of such a Code Authority.

In the event that Subdivisional Code Authorities are established within a division, such Subdivisional Code Authorities shall establish a Divisional Code Authority to exercise the functions hereinafter provided for a Divisional Code Authority and any other functions which may be conferred upon the Divisional Code Authority by the Subdivisional Code Authorities, all in conformity with any rules and regulations prescribed by the Administrator. One member of a Divisional Code Authority, without vote, shall be appointed by the President.

A Code Authority shall administer this Code in its Division or Subdivision and shall have the duties and exercise the powers which are conferred upon it in this article and in Article VI of this Code, and shall have authority to adopt appropriate by-laws, rules and regulations for the exercise of its functions.

Marketing agencies or trade associations may be established or maintained within any division or subdivision by a voluntary association of producers within any producing district therein, as such district may be defined by the Code Authority and function under such general rules and regulations as may be prescribed by the Code Authority, with the approval of the Administrator, for the purpose of preventing any unfair practices, as defined in Article VI of this Code.

SEC. 3. Each Code Authority shall collect and compile any reports and other information required under the National Industrial Recovery Act; and in investigations of any complaint of unfair practices the Presidential member of a Code Authority shall have power to require reports from, and shall be given access to inspect the books and records of producers within the jurisdiction of such Code Authority to the extent he may deem necessary for the determination of the validity of the complaint. All coal producers subject to the Code shall furnish to any government agency or agencies designated by the Administrator such statistical information as the Administrator may, from time to time, deem necessary for the purposes recited in Section 3 (a) of the National Industrial Recovery Act; and any reports and other information collected and compiled by a Code Authority, as heretofore provided, shall be transmitted to such government agencies, as the Administrator may direct.

The expense of administering this Code by a Divisional (or Subdivisional) Code Authority shall be borne by those subject to such Code Authority, each paying his proportionate share, as assessed,

computed on a tonnage basis, in accordance with regulations pr scribed by the Code Authority with the approval of the Administrat

SEC. 4. *Industrial Board.*—There shall be established within days after the creation of the Divisional Code Authorities a Natio Bituminous Coal Industrial Board, consisting of four members de nated by the Divisional Code Authority of Division No. I, two me bers designated by the Divisional Code Authority of Division No. one member each designated by the Divisional Code Authorities Divisions No. III, IV, and V and the five members of the Divisio Code Authorities who have been appointed by the President. T President may appoint not more than three members of the Industr Board in addition to, or in substitution for one or more of, the afo said five members of the Divisional Code Authorities. This Bo shall have the duties and exercise the powers conferred upon it this Code, or any revisions thereof and particularly shall meet fr time to time at the call of the Administrator, who shall be ex offi Chairman thereof, to consider and to make recommendations to Divisional Code Authorities and to the President as to any amen ments of this Code, or other measures which may stabilize and prove the conditions of the industry and promote the public inter therein.

SEC. 5. *Labor Relations.*—(a) Any controversy concerning ho wages, and conditions of employment, or compliance with the pro sions of Article V of this Code, between employers and emplo who are organized or associated for collective action shall, if possi be adjusted by conference and negotiation between duly designa representatives of employers and such employees, meeting either i mine conference or district conference or divisional conference, as machinery for such conference may be established by agreement of parties thereto; and it shall be the duty of employers and emplo to exert every reasonable effort to establish such a machinery adjustment and to utilize it to negotiate to a conclusion such con versies wherever possible.

(b) Any such controversy which cannot be settled in the man so provided and which threatens to interrupt, or has interrupted, o impairing the efficient operation of any mine or mines to such extent as to restrain interstate commerce in the products there shall be referred to the appropriate Bituminous Coal Labor Bo established as hereinafter provided, and the decision of said Bo shall be accepted by the parties to the controversy as effective fo provisional period of not longer than six months, to be fixed by Board.

(c) During the consideration of any such controversy either by agreed machinery of adjustment, or by the Bituminous Coal La Board, neither party to the controversy shall change the conditi out of which the controversy arose, or utilize any coercive or reta tory measures to compel the other party to accede to its demands.

(d) If any such controversy shall involve or depend upon the de mination of who are the representatives of the employees chose provided in Section 7(a) of the National Industrial Recovery Act, appropriate Bituminous Coal Labor Board, through any agent agency it may select, shall have the power to determine the quest by an investigation and, if necessary, by a secret ballot taken u its direction.

(e) A Bituminous Coal Labor Board shall be appointed by the President for each Division, except there shall be two Boards for Division No. I, to exercise the powers herein conferred upon it, which shall consist of three members, one to be selected from nominations submitted by organizations of employees within such Division, one to be selected from nominations by the Divisional Code Authority and one who shall be wholly impartial and disinterested representative of the President. The expenses of such board shall be met by equal contributions from the employers and employees nominating members, the amount and method of collecting which shall be determined by regulations prescribed by the President.

(f) There shall be a National Bituminous Coal Labor Board composed of the members of the six divisional labor boards which may be convened upon call of the Administrator in the event that—

1. A controversy involves employers and employees of more than one division, or

2. The decision of a divisional labor board affects operating conditions of more than one division either directly or because of its effect upon competitive marketing, or

3. In the opinion of the Administrator the decision of a divisional labor board involves the application of a policy affecting the general public, or the welfare of the industry as a whole.

The National Bituminous Coal Labor Board may exercise all the powers conferred upon a divisional labor board, either in giving original consideration to a controversy, or in reviewing the decision of a divisional labor board, which may be either affirmed, set aside and/or modified.

Article VIII—Safety

Employers and employees shall cooperate in maintaining safe conditions of operation in compliance with the applicable requirements of State laws or regulations in conformity therewith.

Article IX—Amendments

Any Code Authority may propose amendments to this Code from time to time effective generally or as to the area within its jurisdiction which, after submission to any other Code Authority affected thereby (which shall include the divisional Code Authority in case of an amendment proposed by a subdivisional Code Authority), may be recommended by the Administrator for the approval of the President.

Article X

This Code and all the provisions thereof are expressly made subject to the right of the President, in accordance with the provision of subsection (b) of Section 10 of the National Industrial Recovery Act, from time to time to cancel or modify any order, approval, license, rule, or regulation issued under Title I of said Act and specifically, but without limitations, to the right of the President to cancel or modify his approval of this Code or any conditions imposed by him upon his approval thereof.

ARTICLE XI—EFFECTIVE DATE AND TERMINATION

This Code shall become effective on the second Monday follow its approval by the President, and shall continue in effect until Ap 1, 1934, and thereafter in the absence of the exercise of the pow reserved to the President in Article X, subject to the exercise of t option, after 30 days' notice to the Administrator, by any coal produ to withdraw his consent after April 1, 1934, to the further enforceme of the Code as a Code to which he has voluntarily given his conse

Approved Code No. 24.
Registry No. 702/45.

SCHEDULE A[1]

Basic Minimum Rates

	Basic minimum rates			
	Minimum inside skilled labor		Minimum outside common labor	
	Per day	Per hour	Per day	Per hour
District A: [2]				
Pennsylvania	$5.00	$0.71 1/16	$4.00	$0.57 1/16
Ohio	5.00	.71 1/16	4.00	.57 1/16
Lower Peninsula of Michigan	5.00	.71 1/16	4.00	.57 1/16
Panhandle District of West Virginia [3]	5.00	.71 1/16	4.00	.57 1/16
District B: Northern West Virginia [4]	5.00	.71 1/16	4.00	.57 1/16
District C:				
Southern West Virginia [5]	4.60	.65 7/16	3.60	.51 1/16
Eastern Kentucky [6]	4.60	.65 7/16	3.60	.51 1/16
Upper Potomac District of West Virginia [7]	4.60	.65 7/16	3.60	.51 1/16
Maryland	4.60	.65 7/16	3.60	.51 1/16
Virginia	4.60	.65 7/16	3.60	.51 1/16
Northern Tennessee [8]	4.60	.65 7/16	3.60	.51 1/16
District D: Indiana	4.67 1/2	.65 9/16	4.20	.60
District E: Illinois	5.00	.71 1/16	4.00	.57 1/16
District F:				
Iowa [9]	4.70	.67 1/16	4.00	.57 1/16
Wayne and Appanoose Counties, Iowa	4.56	.65 1/16	4.00	.57 1/16
District G: [10]				
Missouri, Kansas, Arkansas, and Oklahoma, except shaft, drift, or slope mines in those States	4.35	.62 1/16	3.75	.53 9/16
Shaft, drift, and slope mines in Missouri, Kansas, Arkansas, and Oklahoma	4.00	.57 1/16	3.53	.50 1/16
District H: Western Kentucky [11]	4.60	.65 7/16	3.75	.53 9/16
District J:				
Alabama	2.80	.54 3/16	2.80	.40
Georgia	2.80	.54 3/16	2.80	.40
Southern Tennessee, Hamilton and Rhea Counties	2.80	.54 3/16	2.80	.40
District J-1: Marion, Grundy, Sequatchie, White, Van Buren, Warren, and Bledsoe Counties in the State of Tennessee	4.24	.60 5/16	3.24	.46 3/16
District K:				
New Mexico	5.10	.72 9/16	4.10	.58 9/16
Southern Colorado [12]	5.10	.72 9/16	4.10	.58 9/16
District L: Northern Colorado [13]	5.25	.75	4.25	.60 7/16
District M: Utah	5.44	.77 1/16	4.48	.64
District N:				
Southern Wyoming	5.42	.77 1/16	4.44	.63 5/16
Northern Wyoming	5.42	.77 1/16	4.54	.64 9/16
District O: Montana	5.65	.80 9/16	4.84	.68 9/16
District P: Washington	5.40	.77 1/16	4.00	.57 1/16
District Q:				
North Dakota	4.60	.64 5/16	3.70	.52 9/16
South Dakota	4.60	.64 5/16	3.70	.52 9/16

[1] Includes Hancock, Brooke, Ohio and Marshall Counties.
[2] Includes Monongalia, Marion, Harrison, Taylor, Lewis, Barbour, Gilmer, Upshur, Randolph, Braxton, Clay, and Webster Counties and those mines in Nicholas County served by the B. & O. R.R.
[3] Includes all mines in counties in West Virginia not named under Districts A and B and the Upper Potomac District.
[4] Includes all mines in Kentucky located east of a north and south line drawn along the Western boundary of the City of Louisville.
[5] Includes Grant, Mineral and Tucker Counties.
[6] Includes all Counties in Tennessee not named under Southern Tennessee in District J and J-1.
[7] Excludes Wayne and Appanoose Counties.
[8] Includes all mines in Kentucky west of a north and south line drawn along the western boundary of the City Louisville.
[9] Includes all Counties in Colorado not named under District L.
[10] Includes Jackson, Larimer, Weld, Boulder, Adams, Arapahoe, El Paso, Douglas, Elbert, and Jefferson Counties.
[11]

NOTE.—Differences between districts in the foregoing minimum rates are not to be considered as fixing permanent wage differentials or establishing precedents for future wage scales.

Amendment No. 1—Approved Apr. 28, 1934.
Amendment No. 3—Approved June 4, 1934.

In view of the differentials hereby accorded District J, pending furth order there shall be no sales by operators of said District into the norm consuming markets of another District which is subject to higher rates pay, at any prices for coal of comparable grade and quality, less th the price for such coal in said market charged by such other Distri and there shall be no destructive invasion of such other consuming mark and, in the absence of satisfactory agreements governing this matt the determination of the Administrator on complaint of any such structive invasion shall be conclusive. The requirement that the mi mum rates for tonnage and other piecework in certain Districts should further increased shall be modified so as to read as follows:

"In addition to the increases above provided the minimum rates tonnage and other piecework in Districts B, G, H, J, and J–1, shall further increased, if necessary, by an amount sufficient to maintain customary relationship in the industry between pay for such tonn and piecework and the basic minimum rates for day labor as prescri for such districts in New Schedule A", that requirement, as to increa in District B, shall be satisfied pending further order, by an increase 2,000 pound ton for said District of two and one-half (2½) cents loading rates and one-half (½) cent in cutting rates.[2]

In view of the differentials accorded District G, and in view of situation existing in District H, pending further order there shall be sales by operators of said Districts into the normal consuming mark of another District which is subject to higher rates of pay, at any pri for coal of comparable grade and quality, less than the price for such in said market charged by such other District, and there shall be destructive invasion of such other consuming markets and, in the abse of satisfactory agreements governing this matter, the determination the Administrator on complaint of any such destructive invasion sh be conclusive.[3]

[1] *Amendment No. 2—Approved Apr. 22, 1934.*
[2] *Amendment No. 3—Approved June 4, 1934.*

O

Approved Code No. 24—Amendment No. 4 Registry No. 702—45

NATIONAL RECOVERY ADMINISTRATION

AMENDMENT TO CODE OF FAIR COMPETITION FOR THE BITUMINOUS COAL INDUSTRY

AS APPROVED ON NOVEMBER 5, 1934

UNITED STATES
GOVERNMENT PRINTING OFFICE
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Approved Code No. 24—Amendment No. 4

AMENDMENT TO CODE OF FAIR COMPETITION

FOR THE

BITUMINOUS COAL INDUSTRY

As Approved on November 5, 1934

ORDER

APPROVING AMENDMENT OF CODE OF FAIR COMPETITION FOR THE BITUMINOUS COAL INDUSTRY

An application having been duly made pursuant to and in full compliance with the provisions of Title I of the National Industrial Recovery Act, approved June 16th, 1933, for approval of an amendment to a Code of Fair Competition for the Bituminous Coal Industry as contained in a published Notice of Opportunity to File Objections, Administrative Order 24-52, dated August 1, 1934, and amended to meet certain objections which were filed as provided in said Published Notice and annexed report on said amendment, containing findings with respect thereto, having been made and directed to the President.

NOW, THEREFORE, on behalf of the President of the United States, the National Industrial Recovery Board, pursuant to authority vested in it by Executive Orders of the President, including Executive Order No. 6859, and otherwise, does hereby incorporate, by reference, said annexed report and does find that said amendment and the Code as constituted after being amended complies in all respects with the pertinent provisions and will promote the policy and the purposes of said Title of said Act, and does hereby order that said amendment be and is hereby approved, and that the previous approval of said Code is hereby amended to include approval of said Code in its entirety as amended.

NATIONAL INDUSTRIAL RECOVERY BOARD,
By W. A. HARRIMAN, *Administrative Officer.*

Approval recommended:

W. P. ELLIS,
Acting Division Administrator.

WASHINGTON, D. C.,
November 5, 1934

95345°——1325-24——34

REPORT TO THE PRESIDENT

The PRESIDENT,
The White House.

SIR: An application has been duly made pursuant to and in full compliance with the provisions of the National Industrial Recovery Act, for an amendment to the Code of Fair Competition for the Bituminous Coal Industry, submitted by the Code Authority for the said Industry.

The existing provision of Article VII, Section 3 of the Code for said Industry, is entirely inadequate in view of the necessity of obtaining reliable data and facts for use in studies of wages and prices and in administering the provisions of the Code, and it is therefore evident that the proposed amendment to Article VII, Section 3, of said Code will overcome the existing inadequate provision.

FINDINGS

The Acting Deputy Administrator in his final report to us on the amendment to the Code of Fair Competition for the Bituminous Coal Industry having found as herein set forth and on the basis of all proceedings in this matter:

We find that:

(a) The amendment to said Code and the Code as amended are well designed to promote the policies and purposes of Title I of the National Industrial Recovery Act including the removal of obstructions to the free flow of interstate and foreign commerce which tend to diminish the amount thereof, and will provide for the general welfare by promoting the organization of industry for the purpose of cooperative action among trade groups, by including and maintaining united action of labor and management under adequate governmental sanction and supervision, by eliminating unfair competitive practices, by promoting the fullest possible utilization of the present productive capacity of industries, by avoiding undue restriction of production (except as may be temporarily required) by increasing the consumption of industrial and agricultural products through increasing purchasing power, by reducing and relieving unemployment, by improving standards of labor, and by otherwise rehabilitating industry.

(b) The Code as modified complies in all respects with the pertinent provisions of said Title of said Act, including without limitation subsection (a) of Section 3, Subsection (a) of Section 7 and Subsection (b) of Section 10 thereof.

(c) The Code empowers any Divisional Code Authority to present the aforesaid amendment on behalf of the industry as a whole.

(d) The amendment and the Code as amended are not designed to and will not permit monopolies or monopolistic practices.

(e) The amendment and the Code as amended are not designed to and will not eliminate or oppress small enterprises and will not operate to discriminate against them.

(f) Those engaged in other steps of the economic process have not been deprived of the right to be heard prior to approval of said amendment.

Said amendment is accordingly approved.

For the National Industrial Recovery Board:

W. A. HARRIMAN,
Administrative Officer.

NOVEMBER 5, 1934.

AMENDMENT TO CODE OF FAIR COMPETITION FOR THE BITUMINOUS COAL INDUSTRY

Delete Section 3 of Article VII and substitute in lieu thereof the following:

SECTION 3. (a) Each Code Authority shall set up and maintain a Statistical Bureau which shall be under the direction of a Managing Director, who may be the Secretary of the Code Authority and who shall not be an officer, director, or employee of any producer. All producers shall, in their respective Sub-divisions, (or Divisions) report all spot orders to such Bureau and shall file with such Bureau copies of all contracts for the sale of coal, copies of all invoices, copies of all credit memoranda and such other information concerning the production and sale of coal as such Code Authority, with the approval of its Presidential Member, may require.

(b) Each producer shall in his Sub-division (or Division) file all such reports and other information as described in sub-section (a) above with the Statistical Bureau of the Sub-division (or Division). Failure to file such reports or other information, or filing materially inaccurate reports or other information, shall be a violation of this Code.

(c) All such records shall be held by such Bureau as the confidential records of the producer filing such information, until the Code Authority shall direct their return to the producer filing the same.

(d) Each Bureau shall, if so directed by the Code Authority, compile from such records, in composite form and in such manner as shall not be prejudicial to the interests of any producer, statistical information with respect to the sale and distribution of coal. None of such records nor the information contained therein shall be disclosed to anyone except as so compiled and except as hereinafter provided in subsections (e) and (f) hereof in connection with violations of the Code.

(e) The Managing Director shall examine such records and if such examination shall, in the opinion of the Managing Director, disclose a violation of the Code, the Managing Director shall report such violation to the Presidential Member, together with any information necessary to enable the Presidential Member to consider such violation. In investigations of any complaint of unfair practices the Presidential Member of a Code Authority shall have power to require such other reports from, and shall be given access to inspect the books and records of producers within the jurisdiction of such Code Authority to the extent he may deem necessary for the determination of the validity of the complaint.

(f) If the Presidential Member shall determine that any such complaint as described in subsection (e) hereof discloses a violation of the Code, the Presidential Member shall report such violation to the Code Authority together with any reports or other information

filled in accordance with the provisions of this section which may appear necessary to the Presidential Member to enable the Code Authority to consider the merits of such violation and to take such steps as it shall deem necessary to secure observance of the Code.

(g) All producers subject to the Code shall furnish to any government agency or agencies designated by the Administrator such statistical information as the Administrator may from time to time deem necessary for the purpose recited in Section 3 (a) of the National Industrial Recovery Act.

(h) The expense of administering this Code by a Divisional (or Sub-Divisional) Code Authority shall be borne by those subject to such Code Authority, each paying his proportionate share, as assessed, computed on a tonnage basis, in accordance with regulations prescribed by the Code Authority with the approval of the Administrator, and failure to pay such assessments shall constitute a violation of the Code.

Approved Code No. 24—Amendment No. 4.
Registry No. 702–45.

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Approved Code No. 24—Amendment No. 5 Registry No. 702—45

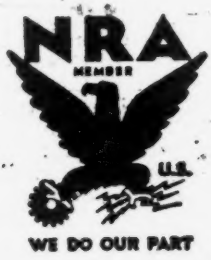
NATIONAL RECOVERY ADMINISTRATION

AMENDMENT TO CODE OF FAIR COMPETITION

FOR THE

BITUMINOUS COAL INDUSTRY

AS APPROVED ON JANUARY 8, 1935



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Approved Code No. 24—Amendment No. 5

AMENDMENT TO CODE OF FAIR COMPETITION

FOR THE

BITUMINOUS COAL INDUSTRY

As Approved on January 8, 1935

ORDER

APPROVING AMENDMENTS OF CODE OF FAIR COMPETITION FOR THE BITUMINOUS COAL INDUSTRY

An application having been duly made pursuant to and in full compliance with the provisions of Title I, of the National Industrial Recovery Act, approved June 16, 1933, for approval of an amendment to the Code of Fair Competition for the Bituminous Coal Industry:

NOW, THEREFORE, on behalf of the President of the United States, the National Industrial Recovery Board, pursuant to authority vested in it by Executive Orders of the President, including Executive Order No. 6859, and otherwise, does hereby incorporate, by reference, said annexed report and does find that said amendment and the Code as constituted after being amended comply in all respects with the pertinent provisions and will promote the policy and purposes of said Title of said Act, and does hereby order that said amendment be and it is hereby approved, and that the previous approval of said Code is hereby amended to include an approval of said Code in its entirety as amended.

This Order shall become effective immediately.

NATIONAL INDUSTRIAL RECOVERY BOARD,
By W. A. HARRIMAN, *Administrative Officer.*

Approval recommended:
W. P. ELLIS,
Division Administrator.

WASHINGTON, D. C.,
January 8, 1935.

107604°——1465-51——35

REPORT TO THE PRESIDENT

The PRESIDENT,
The White House.

SIR: An application has been duly made pursuant to and in full compliance with the provisions of the National Industrial Recovery Act, for an amendment to the Code of Fair Competition for the Bituminous Coal Industry, submitted by the Southern Sub-Divisional Coal Code Authority No. 1 of Division I after submission to all other Code Authorities for the said Industry.

The existing provision of Article VI, Section 1, of the Code for said Industry, is entirely inadequate in view of the necessity for clarification by reason of varying interpretations placed upon the wording thereof. It is, therefore, evident that the proposed amendment of Article VI, Section 1, of said Code, as modified by the National Industrial Recovery Board, as provided in the notice for public hearing thereon, will overcome the existing inadequate provision.

FINDINGS

The Acting Deputy Administrator in his final report to us on the amendment to the Code of Fair Competition for the Bituminous Coal Industry having found as herein set forth and on the basis of all proceedings in this matter:

We find that pending such further order as the National Industrial Recovery Board may enter thereon;

(a) The amendment to said Code and the Code as amended are designed to promote the policies and purposes of Title I of the National Industrial Recovery Act including the removal of obstructions to the free flow of interstate and foreign commerce which tend to diminish the amount thereof, and will provide for the general welfare by promoting the organization of industry for the purpose of cooperative action among trade groups, by inducing and maintaining united action of labor and management under adequate governmental sanction and supervision, by eliminating unfair competitive practices, by promoting the fullest possible utilization of the present productive capacity of industries, by avoiding undue restriction of production (except as may be temporarily required) by increasing the consumption of industrial and agricultural products through increasing purchasing power, by reducing and relieving unemployment, by improving standards of labor, and by otherwise rehabilitating industry.

(b) The Code as amended complies in all respects with the pertinent provisions of said Title of said Act, including without limitation subsection (a) of Section 3, Subsection (a) of Section 7 and Subsection (b) of Section 10 thereof.

(c) The Code empowers any Sub-Divisional Code Authority to present the aforesaid amendment on behalf of the Industry as

whole after submission to all other Code Authorities affected thereby (which shall include the Divisional Code Authority).

(d) The amendment and the Code as amended are not designed to and will not permit monopolies or monopolistic practices.

(e) The amendment and the Code as amended are not designed to and will not eliminate or oppress small enterprises and will not operate to discriminate against them.

(f) Those engaged in other steps of the economic process have not been deprived of the right to be heard prior to approval of said amendment.

Said amendment is accordingly approved.

For the National Industrial Recovery Board:

W. A. HARRIMAN,
Administrative Officer.

JANUARY 8, 1935.

AMENDMENT TO CODE OF FAIR COMPETITION FOR THE BITUMINOUS COAL INDUSTRY

Delete Section 1 of Article VI and substitute in lieu thereof the following:

SECTION 1. The making of a contract to sell or offer to sell coal, whether for immediate or future delivery, at a price below the fair market price at the date of such contract or offer (regardless of the dates specified for the making of deliveries), or any sale or delivery of coal (other than pursuant to contract made in accordance with the foregoing) below the fair market price thereof at the time of delivery, determined as hereinafter provided, is hereby declared to be an unfair competitive practice and in violation of this Code. Such fair market price shall be determined and established as hereinafter provided, and it shall be proper in determining such fair market price to consider the purposes of the National Industry Recovery Act, the minimum rates of pay herein established, the furnishing of employment for labor and the competition with other coals, fuels, and form of energy for heat production.

Approved Code No. 24—Amendment No. 5.
Registry No. 702-45.

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NATIONAL RECOVERY ADMINISTRATION

AMENDMENT TO CODE OF FAIR COMPETITION

FOR THE

BITUMINOUS COAL INDUSTRY

AS APPROVED ON JANUARY 25, 1935

UNITED STATES
GOVERNMENT PRINTING OFFICE
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Approved Code No. 24—Amendment No. 6

AMENDMENT TO CODE OF FAIR COMPETITION

FOR THE

BITUMINOUS COAL INDUSTRY

As Approved on January 25, 1935

ORDER

APPROVING AMENDMENT OF CODE OF FAIR COMPETITION FOR THE BITUMINOUS COAL INDUSTRY

An application having been duly made pursuant to and in full compliance with the provisions of Title I, of the National Industrial Recovery Act, approved June 16, 1933, for approval of an amendment to the Code of Fair Competition for the Bituminous Coal Industry:

NOW, THEREFORE, on behalf of the President of the United States, the National Industrial Recovery Board, pursuant to authority vested in it by Executive Orders of the President, including Executive Order No. 6859, and otherwise; does find that said amendment and the Code as constituted after being amended comply in all respects with the pertinent provisions and will promote the policy and purposes of said Title of said Act, and does hereby order that said amendment be and it is hereby approved to become effective immediately and remain effective only until and including April 30, 1935, and that the previous approval of said Code is hereby amended to include an approval of said Code in its entirety as amended.

NATIONAL INDUSTRIAL RECOVERY BOARD,
By W. A. HARRIMAN, *Administrative Officer.*

Approval recommended:

W. P. ELLIS,
Division Administrator.

WASHINGTON, D. C.,
January 25, 1935.

111342°——1465-111——35

REPORT TO THE PRESIDENT

The PRESIDENT,
The White House.

SIR: An application has been duly made pursuant to and in full compliance with the provisions of the National Industrial Recovery Act, for an amendment to the Code of Fair Competition for the Bituminous Coal Industry, submitted by a Sub-Divisional Code Authority of the Industry and an amendment submitted by the National Recovery Administration for consideration at the public hearing held in Washington, D. C., January 4, 1935.

At this hearing, modifications of such proposed amendment were submitted by the National Bituminous Coal Industrial Board, an agency created and established under the Code for the purpose among others, of considering and making recommendations to the President as to any amendments of the Code. Pursuant to the hearing and to information and considerations properly before us, as provided in the published notice of hearing, these amendments have been revised. Also as a result of this hearing an amendment to Article VI, Section 1 was approved January 8, 1935.

The existing provisions of Article VI, Sections 2, 3 and 4 and Article VII, Section 2 of the Code for said Industry are entirely inadequate in view of the necessity for changing and improving the methods and procedure in establishing fair market prices. An extreme emergency confronts the Industry occasioned by the custom of making forward contracts, under which the price for delivery of coal might jeopardize the hour and wage provisions of the Code, resulting in serious labor disturbances to the detriment of the public. It is, therefore, evident that the proposed amendment of Article VI, Sections 2, 3 and 4 and of Article VII, Section 2 of said Code, as modified by the National Industrial Recovery Board, as provided in the notice for public hearing thereon, will assist in improving the existing inadequate provisions.

FINDINGS

The Acting Deputy Administrator in his final report to us on the amendment to the Code of Fair Competition for the Bituminous Coal Industry having found as herein set forth and on the basis of all proceedings in this matter:

We find that pending such further order as the National Industrial Recovery Board may enter thereon;

(a) The amendment to said Code and the Code as amended are designed to promote the policies and purposes of Title I of the National Industrial Recovery Act including the removal of obstructions to the free flow of interstate and foreign commerce which tend

to diminish the amount thereof, and will provide for the general welfare by promoting the organization of industry for the purpose of cooperative action among trade groups, by inducing and maintaining united action of labor and management under adequate governmental sanctions and supervision, by eliminating unfair competitive practices, by promoting the fullest possible utilization of the present productive capacity of industries, by avoiding undue restriction of production (except as may be temporarily required) by increasing the consumption of industrial and agricultural products by increasing purchasing power, by reducing and relieving unemployment, by improving standards of labor, and otherwise by rehabilitating industry and conserving natural resources.

(b) The Code as amended complies in all respects with the pertinent provisions of said Title of said Act, including without limitation Subsection (a) of Section 3, Subsection (a) of Section 7 and Subsection (b) of Section 10 thereof.

(c) The Code empowers the National Bituminous Coal Industrial Board to consider and to make recommendations to the President as to any amendments of this Code. It also empowers any Sub-Divisional Code Authority to propose amendments on behalf of the Industry as a whole after submission to any other Code Authority affected thereby (which shall include the Divisional Code Authority).

(d) The amendment and the Code as amended are not designed to and will not permit monopolies or monopolistic practices.

(e) The amendment and the Code as amended are not designed to and will not eliminate or oppress small enterprises and will not operate to discriminate against them.

(f) Those engaged in other steps of the economic process have not been deprived of the right to be heard prior to approval of said amendment.

In view of the emergency and conditions existing, said amendment, as modified, is accordingly approved to become effective immediately and for a temporary period to and including April 30, 1935, during which period further consideration will be given to the problems involved.

For the National Industrial Recovery Board:

W. A. HARRIMAN,
Administrative Officer.

JANUARY 25, 1935.

AMENDMENT TO CODE OF FAIR COMPETITION FOR THE BITUMINOUS COAL INDUSTRY

Modify Article VI by inserting to appear in said Article VI as a preamble thereto and immediately to precede Section 1 thereof the following:

For the purpose of establishing and maintaining fair practices so as to protect the public in its right to buy coal at reasonable prices; to provide and maintain an adequate wage structure for employees; and to protect the producers in their right to produce coal and sell it in the markets, while observing the purposes of the National Industrial Recovery Act, it is provided as follows:

and by modifying Sections 2, 3 and 4 of said Article VI in such manner that the preamble to and Sections 1, 2, 3 and 4 of said Article VI shall read as follows:

Article VI—Unfair Practices

For the purpose of establishing and maintaining fair practices so as to protect the public in its right to buy coal at reasonable prices; to provide and maintain an adequate wage structure for employees; and to protect the producers in their right to produce coal and sell it in the markets, while observing the purposes of the National Industrial Recovery Act, it is provided as follows:

Section 1. The making of a contract to sell or offer to sell coal, whether for immediate or future delivery, at a price below the fair market price at the date of such contract or offer (regardless of the dates specified for the making of deliveries), or any sale or delivery of coal (other than pursuant to contract made in accordance with the foregoing) below the fair market price thereof at the time of delivery, determined as hereinafter provided, is hereby declared to be an unfair competitive practice and in violation of this Code. Such fair market price shall be determined and established as hereinafter provided, and it shall be proper in determining such fair market price to consider the purposes of the National Industrial Recovery Act, the minimum rates of pay herein established, the furnishing of employment for labor and the competition with other coals, fuels, and forms of energy or heat production. (Amendment Number Five, January 8, 1935.)

Section 2 (a). The fair market prices of coal of any kind, grade or size, referred to in the next preceding section, subject to the power of review hereinafter stated, shall be—

(1) The minimum prices for the various kinds, grades and sizes in the various consuming markets which may be established for future application by a marketing agency or by marketing agencies of whatever form or howsoever constituted now existing or here-

after created or organized, acting for producers of at least two-thirds of the commercial tonnage of any coal district or group of districts, such minimum prices to be effective when and as announced as provided in paragraph (f) of this Section.

(2) The minimum prices for the various kinds, grades and sizes in the various consuming markets, which may be established for future application by the respective Code Authorities hereinafter set up, for their respective areas where no such marketing agency exists, such minimum prices to be effective when announced as provided in paragraph (f) of this Section.

(b) In determining such fair market prices, marketing agencies and Code Authorities shall take into consideration, among other factors, the purposes of the National Industrial Recovery Act, the minimum rates of pay herein established, the furnishing of employment for labor, competition with other coals, fuels and forms of energy or heat production, the customs, requirements and needs of the buying and consuming public for various kinds, grades and sizes of coal and the necessity for giving to consumers reasonable opportunity to buy and to producers reasonable opportunity to sell their coal in usual and normal markets. Furthermore, in order to determine such fair market prices, the marketing agencies and Code Authorities shall classify all coals, applying all factors usually considered in connection with physical structure and chemical analysis and their effect upon the salability and use value of such coals, and with due regard for the foregoing provisions, shall so price coals as to afford producers reasonable opportunity to sell the coal in competition with other coals, fuels and forms of energy or heat production, and to this end the marketing agencies and Code Authorities shall give due regard to the prices made by competing districts, but it shall be their purpose, while making competitive market prices, not to make dumping prices in any area of consumption.

(c) The term "marketing agency" as used in this Code shall include any trade association of coal producers complying with the requirements of a marketing agency and exercising the functions thereof as provided herein.

(d) Where a marketing agency functioning in any district or group of districts acts as selling agent for producers of at least two-thirds of the commercial tonnage, the Code Authority in announcing the prices of coal of producers outside of such agency in such district or group of districts shall utilize and follow the practices and methods of classification, and the classifications, used by such agency and shall adopt the same prices for the respective classes of coal as those fixed by such agency.

(e) The fair market prices established for future application under the provisions of Section 2 (a) (1) shall be reported to said Code Authorities by any such marketing agencies in such manner as may be required by such Authorities.

(f) The fair market price or prices of bituminous coal established as herein provided shall become effective, subject to appeal, suspension and modification as hereinafter provided, when the same shall be approved by the Presidential Member of the Code Authority (acting under the direction of the Administrator), and when published as provided herein. In his approval the Presidential Member may per-

mit a reduction or increase in said price or prices by action of said marketing agencies or Code Authorities within the limits which he may prescribe. Said prices shall be published by the Code Authority when so established and approved by the Presidential Member and from time to time thereafter as may be determined by the Code Authority or required by the Administrator, and in any event when any change is made therein. Simultaneously with such publication said fair market price or prices shall be transmitted by the Code Authority making or giving effect to and publishing any change in price, to the National Recovery Administrator for his review and subsequent action.

(g) Each Code Authority shall, at all times, provide and keep open an office during business hours to which any coal producer in its district or districts and any representative of the Administrator may apply for information with respect to classifications and prices.

SECTION 3. In order to prevent injustices among or between producers, any producer shall be granted a hearing upon written complaint, and the marketing agency or Code Authority which establishes fair market prices for the coals of such producer shall hold said hearing within five days (unless extension of time is consented to by such producer) after the receipt of said complaint, directly or through such agency as it may establish. In such complaint, the producer shall set out the grounds of his complaint, whether he is objecting to the prices fixed on his coal, and whether he desires an increase or decrease in his prices. He shall further set out whether he is objecting to prices of other producers in the same district or on account of prices in competing districts. The marketing agency or Code Authority, shall, to the extent reflected in the evidence, take into consideration, in addition to the factors set out in this article, the market demand for the class of coal of the producer, the relative operating time at the mines of the producer, as compared with that of the mines of other producers in the same and competing districts, their past production history, as well as the quality of the coal and the comparative delivered value thereof to the consumer, and such other pertinent facts as may be presented, and shall make its decision within five days after the hearing, unless extension of time is consented to by such producer. A record shall be made of all the facts and evidence presented to the marketing agency or Code Authority, as the case may be, at such hearing, and of the decision rendered thereon. Such producer shall have the right of appeal to an impartial Board of Arbitration which shall be set up by such agency or Code Authority, as hereinafter provided; and the decision of such Board shall be binding upon the producer and shall constitute the decision of such agency or Code Authority.

SECTION 4. In order to establish fair competitive price relationships and practices between marketing agencies and/or Code Authorities representing different Divisions or Subdivisions, such agencies and Code Authorities are hereby authorized and directed to meet and confer with each other and endeavor to agree upon a basis of fair competitive prices and practices relating thereto as between such Divisions and/or Subdivisions. They shall take into consideration the same factors as are considered by Code Authorities as between the producers within the Divisions or Subdivisions as here-

inbefore set out. Any such agreements made between marketing agencies and/or Code Authorities representing competing Divisions and/or Subdivisions shall be submitted to the Administrator for approval or disapproval and shall become effective within ten days after receipt thereof by him unless disapproved as being against the interest of the public. Such agencies and/or Code Authorities shall endeavor to agree between themselves, subject to the approval of the Administrator, on rules of procedure, notices of meetings, and other necessary order of business for such meetings looking to such agreements, notices of all of which shall be furnished to the Administrator or his representative, who shall have the opportunity to be present at such meetings. In default of an agreement as to such rules and other procedural matter approved by him, the Administrator may prescribe the same.

If any such agency or Code Authority shall be of the opinion that any producer or producers represented by it is adversely affected by any failure to reach such agreement, or that any prices or practices relating thereto, heretofore or hereafter established in a different Division or Subdivision, are unfair competitive prices or practices relating thereto and no such agreement in respect thereof has been reached, the dissatisfied agency or Code Authority shall have the right of appeal to the National Coal Board of Arbitration, as hereinafter provided.

ARTICLE VII—ADMINISTRATION

Change the designation of Section 2 to Sub-section (a) of Section 2 and add two additional sub-sections to said Section to be designated (b) and (c), as follows:

(b) Every marketing agency and Code Authority establishing prices as herein provided shall immediately set up and maintain a permanent impartial Board of Arbitration for the marketing agency, Division or Subdivision for which it acts, to which any producer represented by such agency or Code Authority may appeal from any decision thereof as to his classification or price or the practice complained of; provided, however, that any marketing agency or Code Authority may elect to join with any other marketing agency or Code Authority agreeing thereto, with the approval of the Administrator, to set up such Board for their joint use for the purposes of this Article. Such Board shall consist of not more than five members, who shall not be connected directly or indirectly with the coal industry during the time they serve as members of such Board. Such Board shall prescribe rules of procedure and keep a record of its proceedings. Any producer filing an appeal shall do so in writing, accompanied by evidence of service of a copy thereof upon such Code Authority or marketing agency. Such appeal shall be heard within five days of the date of filing unless the producer taking the appeal shall consent to extension of such time. Such Board in reaching its decision on any such controversy shall be guided, as the basis of such decision, by the principles upon which fair competitive market prices and practices relating thereto are to be established as hereinbefore provided in Article VI; and such Board shall decide the matters at issue within ten days after the hearing and the decision of such Board

shall be final and binding on the producer and shall constitute the decision of such Code Authority or marketing agency. If the decision of the Board favors the complainant, the marketing agency or Code Authority shall revise the price or practice complained of in accordance with such decision, or in the case of failure of the said Board to act within such ten days or such extended period as may be consented to by the complainant, such agency or Code Authority shall likewise revise such price or practice complained of as if the decision had been in favor of the complainant.

(c) In order to settle disputes and controversies between or among marketing agencies or Code Authorities representing different Divisions or Subdivisions with respect to fair competitive prices and practices relating thereto, there shall be created an impartial National Coal Board of Arbitration of five members, who shall not be connected directly or indirectly with the coal industry during the time they serve as members of such Board. The nine members of the National Bituminous Coal Industrial Board designated by the Divisional Code Authorities shall constitute electors by majority vote to elect, subject to the approval of the Administrator, and fix the salaries of the members of said National Coal Board of Arbitration and fill any vacancies thereon. The members of the National Coal Board of Arbitration shall be paid salaries at the rate of not to exceed $10,000, each per year and shall serve for a term of two years, subject to removal by affirmative vote of at least six of said electors. Their salaries and traveling expenses and all necessary office expenses shall be paid by Divisional Code Authorities, contributing on a tonnage basis. Complaints to such Board shall be in writing, setting forth the reasons therefor, and may be made only by a marketing agency or by a Code Authority. The Board shall make all necessary rules and regulations for its operation and procedure and shall keep a record of its actions and proceedings. Said Board shall hear all complaints within ten days (or such additional time as may be consented to by complainant) after receipt of formal complaint in writing, accompanied by evidence satisfactory to the Board that copy thereof has been served upon the respondent marketing agency or Code Authority. Copies of the complaints shall also be furnished to other interested marketing agencies and Code Authorities and to the Administrator in accordance with rules of the Board. The Board shall decide all matters submitted to it within ten days after the hearing unless the time is extended with consent of the complainant and its action shall, subject to changes made under the provisions of the Code, be binding upon the parties for a period of not less than ninety days unless the Board in its discretion shall consent to review its action, and thereafter until new matter is submitted by the complainant sufficient in the opinion of the Board to cause it to change its decision. In settling and determining the disputes and controversies between Divisions and Subdivisions above referred to, said National Coal Board of Arbitration shall be governed by the same principles and standards, facts and factors as herein prescribed for the marketing agencies, Code Authorities, and Boards of Arbitration in fixing prices and determining disputes respecting prices and practices relating thereto. The decision of the Board shall be trans-

mitted to the Administrator for approval or disapproval and shall become effective within ten days after its receipt by him unless disapproved as being against the interest of the public. Pending hearing on and decision of such complaint the prices or practices complained of may by order of the Board and on such conditions as it may prescribe be suspended or modified.

Appropriate publication shall be made by the Code Authority giving effect to any change in price required by such decision.

Approved Code No. 24—Amendment No. 6.
Registry No. 702–45.

○

[fol. 961] National Coal Association

Southern Building, Washington, D. C.

March 14, 1935.

The National Recovery Administration has just released the following Amendment to the Code of Fair Competition for the Bituminous Coal Industry.

J. D. Battle, Executive Secretary.

Amendment to the Code of Fair Competition for the Bituminous Coal Industry

Delete the period of the second sentence of Sub-Section (a) of Section 2, Artiele VII, and substitute therefor a semi-colon, and add after such semi-colon the following: provided each Code Authority, Divisional or Subdivisional, shall have one member thereon who shall be selected from nominations submitted by the accredited and recognized organization of employees. .

[fol. 961½] National Coal Association

Southern Building, Washington, D. C.

March 30, 1935.

Following is the order released today making effective Amendment No. 8 to the Bituminous Coal Code.

J. D. Battle, Executive Secretary.

An application having been duly made pursuant to an- in full compliance with the provisions of Title I of the National Industrial Recovery Act, approved June 16, 1933, for approval of an amendment to a Code of Fair Competition for the Bituminous Coal Industry and annexed report on said amendment, containing findings with respect thereto, having been made and directed to the President:

Now, therefore, on behalf of the President of the United States, the National Industrial Recovery Board, pursuant to authority vested in it by Executive Orders of the President, including Executive Order No. 6543-A, Executive Order No. 6859 and Executive Order No. 6993, and other-

wise, does hereby incorporate by reference said annexed report and does find that said amendment and said Code as constituted after being so amended complies in all respects with the pertinent provisions and will promote the policy and the purposes of said Title of said Act, and does hereby order that said amendment be and is hereby approved, and that the previous approval of said Code is hereby amended to include approval of said Code in its entirety as amended,

Further ordered, that the order of this Board hereinabove recited be and hereby is made without prejudice to the Board's consideration of an appropriate action upon any application for amendment to or modification of said Code now pending in or with the National Recovery Administration and subject to the power especially reserved in and by said Board to order the amendment or modification of any provision of said Code in conformity with any agreement affecting such provision which may be reached between employers and employees in said Industry and presented to said Board at any time between April 1, 1935, and June 16, 1935, both dates inclusive for its consideration thereof and action thereon.

National Industrial Recovery Board, (Signed) by Donald Richberg, Acting Chairman.

Attest: (Signed) L. C. Marshall, Executive Secretary.

Approval recommended: (Signed) W. P. Ellis, Division Administrator.

Washington, D. C., March 30, 1935.

Amendment No. 8 to the Code of Fair Competition for the Bituminous Coal Industry reads as follows:

"Add a new sentence to, immediately to follow the present provision of, and to become a part of, Article XI to read as follows:

"This Code and all the provisions thereof, despite any provisions to the contrary contained therein and especially, but without limitation to, those provisions of Articles IV, VI, and VII providing for a time limitation upon the effect of such provisions or any of them, which may provide that the effect of such provisions or any of them shall terminate prior to June 16, 1935, shall remain effective to and including June 16, 1935."

[fol. 962] PLT'FF'S EX. 60

National Bituminous Coal Commission

Immediate Release

November 4, 1935.

Bulletin

Acceptances to the code increased by more than 300 over the week-end, bringing the total received to date to 2,540.

Although exact tonnage figures represented by these acceptances is not definitely known, estimates based upon figures supplied by Deputy District Secretaries indicate that producers claiming 161,206,625 tons production during 1934 have signed acceptances. However, that figure, too, is increasing daily.

[fol. 963] PLAINTIFF'S EXHIBIT 61

Coal

Strikes, Suspensions, and Lockouts

Table 12—Strikes, Suspensions, and Lockouts in Coal Mines, by States, in 1932

State	Total number of men employed	Number of men on strike	Man-days idle on account of strike	Average number of days lost on account of strike	
				Per man employed	Per man on strike
Alabama	20,443	.....	.....	.....	.....
Alaska	120	.....	.....	.....	.....
Arizona	17	.....	.....	.....	.....
Arkansas	4,325	1,964	103,522	24	53
California, Idaho, and Oregon	141	.....	.....	.....	.....
Colorado	8,749	.....	.....	.....	.....
Georgia	64	.....	.....	.....	.....
Illinois	47,597	32,961	4,397,006	92	133
Indiana	10,639	3,820	507,051	48	133
Iowa	8,086	389	7,503	1	19
Kansas	3,591	58	350	(1)	6
Kentucky	42,267	721	30,725	1	43
Maryland	3,105	67	402	(1)	6
Michigan	940	.....	.....	.....	.....
Missouri	5,677	301	48,590	9	161
Montana	1,525	748	28,100	18	38
Nex Mexico	2,602	.....	.....	.....	.....
North Carolina	26	.....	.....	.....	.....
North Dakota	1,311	.....	.....	.....	.....
Ohio	23,280	15,290	2,130,292	92	139
Oklahoma	3,063	970	46,903	15	48
Pennsylvania, bituminous	104,532	2,021	113,696	1	56
South Dakota	84	.....	.....	.....	.....
Tennessee	7,525	550	35,967	5	65

DEFENDANT'S EXHIBIT 61

State	Total number of men employed	Number of men on strike	Man-days idle on account of strike	Average number of days lost on account of strike: Per man employed	Average number of days lost on account of strike: Per man on strike
Texas	699	.....	.....	.....	.....
Utah	2,842	.....	.....	.....	.....
Virginia	10,376	140	140	(1)	1
Washington	2,816	958	42,266	15	44
West Virginia	85,765	1,510	44,307	.....	29
Wyoming	4,173	399	15,648	4	39
Total bituminous	406,380	62,867	7,552,468	19	120
Pennsylvania anthracite	121,243	34,259	289,523	2	9
Grand total	527,623	97,126	7,841,991	15	81

(1) One half day or less.

[fol. 964] PL'FF'S EX. No. 62

Wage Proposal Submitted to the Joint Conference of Operators and Mine Workers, Pages 48, 49, and 50 of Reporters Transcript of "Report of Proceedings of the Joint Conference of Coal Operators and Miners of Western Pennsylvania, Ohio, Indiana and Illinois", at Miami, Florida, February 14-22, 1927.

Mr. W. H. Haskins, Ohio. (Operator.) I would like to present a resolution for the consideration of the Joint Conference:

Be it resolved,

(1) That the wage scale for the Central Competitive Field commencing April 1, 1927, must be continuing and at all times a competitive scale with the wages and conditions prevailing in West Virginia and Kentucky.

(2) That in order to make effective Clause 1 a Commission be selected by the respective parties to this Agreement consisting of four Miners and four Operators and three mediators to be mutually chosen by such Commission; or should such Commission be unable to agree upon three persons to act at mediators, or for any reason whatsoever shall fail, neglect or refuse to select such mediators, then the Chief Justice of the United States Supreme Court shall at once select such mediators, and such selection shall be accepted by both parties to this contract.

(3) That the duties of such Commission shall be as folfows:

(a) To determine a competitive wage scale for the Central Competitive Field.

(b) To readjust such scale from time to time in order to maintain competitive conditions.

(c) To have final jurisdiction in all grievances appealed from the several districts.

(d) To perform such other duties as may be agreed upon by the Joint Conference of Miners and Operators.

[fol. 965] Mr. Chairman, we wish to submit that as a proposition from the operators as a basis upon which to negotiate a scale effective April 1, 1937.

Charman Miller: You offer that as a motion, as I understand it.

Mr. Haskins: Yes.

Mr. H. C. Perry (Illinois): I second the motion.

Chairman Miller: The resolution submitted by Mr. Haskins is now before you for consideration.

(Mahan & Mahan, Shorthand Reporters.)

[fol. 966] Deductions were made from gross earnings of miners and loaders when charged for powder, dynamite, or other explosives, fuses, and caps used by them in blasting coal from the seams, and for tool sharpening or blacksmithing. The average earnings in this report were, therefore, computed on net earnings after such deductions had been made. A few companies did not charge wage earners for explosives or for tool sharpening.

[fol. 966] PLAINTIFF'S EXHIBIT 63

Table 1—Average Number of Starts (Days) and Average Hours and Earnings of Miners and Loaders, 1922, 1924, 1926, 1929, 1931, and 1933

(Data in this table are for wage earners who are usually paid tonnage rates)

Year	Number of mines	Number of wage earners	Average number of starts (days) worked in half month	Average hours: In half month based on—: Time at face, including lunch	Average hours: In half month based on—: Time in mine	Average hours: Per start (day) based on—: Time at face, including lunch	Average hours: Per start (day) based on—: Time in mine	Average earnings: Per hour based on—: Time at face, including lunch	Average earnings: Per hour based on—: Time in mine	Average earnings: In half month	Average earnings: Per start (day)
1922[1]	200	33,360	8.9	68.1	73.7	7.7	8.3	$0.915	$0.845	$62.30	$7.03
1924	599	91,167	8.3	64.6	70.0	7.8	8.5	.843	.777	54.44	6.60
1926	556	96,010	9.5	75.4	82.2	7.9	8.6	.817	.749	61.61	6.46
1929	535	99,405	9.1	72.6	79.6	8.0	8.8	.687	.626	49.85	5.50
1931	469	90,063	7.0	56.5	61.9	8.0	8.8	.599	.546	33.82	4.82
1933	444	78,896	7.1	57.2	63.2	8.0	8.9	.395	.357	22.59	3.18

[1] Includes data for Utah, Washington, and Wyoming.

Source: Photostat of material appearing on page 4 of "Wages and Hours of Labor in Bituminous Coal Mining: 1933," Bulletin No. 601 of the U. S. Bureau of Labor Statistics.

[fol. 967] P.'s No. 64

House Agreement, Pursglove, W. Va.

This agreement, made in duplicate this 21st day of October, 1926, between the Pursglove Coal Mining Co., an Ohio Corporation, party of the first part, and Milton Austin, party of the second part.

Witnesseth: That in consideration of the party of the second part being in the employment of the party of the first part, and in the further consideration of $4 per month, payable by the party of the second part to the party of the first part semimonthly, from the date hereof until the termination of the right of occupancy hereby given, as hereinafter provided, the party of the first part does give to the party of the second part as an incident to said employment and for the better performance of his services to the party of the first part, the right to occupy the premises described and designated as ranch No. 3, No. 2 mine, situate upon the coal property of the party of the first part at its mining property in Cass district, Monongalia County, W. Va., from the date hereof until the termination of the right hereby given, as hereinafter provided. The said party of the second part shall not have the right to transfer this agreement, nor to permit the use and occupancy of any part of any building on said premises by any person other than the members of the family of the party of the second part, without the written consent of the party of the first part. The party of the second part covenants and agrees to keep the buildings on said premises, and the ground surrounding the same, clean and in a sanitary condition and free from objectionable or offensive refuse, and further covenants that he will not carry on thereon, and will not permit any one occupying the premises with him as a member of his family to carry on thereon, any unlawful business or occupation during the period of his occupancy.

The party of the second part further covenants and agrees to faithfully observe and comply with all the general rules and regulations made by the party of the first part governing the use and occupancy by employees of the party of the first part of houses owned and maintained by it as places of residence for its employees, and which are communicated to the party of the second part by the party of the first part, and particularly covenants and agrees to ob-

serve and comply with all of such rules and regulations having for their object the lessening of fire risk. The party of the first part hereby reserves the right, by its duly authorized officers, agents, or employees, to enter the said premises and any part thereof at all reasonable times to inspect the same.

The party of the second part further expressly covenants and agrees that the party of the first part shall not [fol. 968] be required to furnish a dwelling house to the party of the second part during the entire period of his employment, but that, on the contrary, the party of the first part may require the party of the second part to vacate the said premises at any time the party of the first part, in its sole discretion, no longer desires the party of the second part to occupy said premises.

The parties hereto hereby expressly agree that said right of occupancy may be terminated at any time by either party hereto giving to the other party five days' notice in writing of the intention to terminate the same, and, if such notice be given, said right of occupancy shall cease and terminate upon the date specified in said notice for the termination of said right, and if no such date be specified said right of occupancy shall end and terminate upon the fifth day after the service of such notice; and said right shall, without notice, end and terminate whenever, for any cause whatsoever, the party of the second part shall be discharged by the party of the first part, or shall quit the employment of the party of the first part, or shall for any reason cease, for a period of two consecutive days, to perform the duties assigned to him by the party of the first part. Party of the second part covenants and agrees to vacate said premises within five days after the employment of the party of the second part with the party of the first part shall cease, or after said party of the second part's right of occupancy shall terminate as aforesaid, without notice or demand of any kind whatsoever by the party of the first part, and without the institution of any proceedings at law for the possession of said premises. Upon the termination of said right of occupancy, as aforesaid, the party of the first part may, without further notice, demand, or proceeding, reenter upon and take possession of the property and premises herein described, and summarily dispossess the party of the second part thereof, and summarily remove there-

from the party of the second part, his family and all of his goods and property, and in so doing shall have the right to use such and so much force as may be necessary to remove the party of the second part and his family and his and their goods and property from said premises; and in case of such removal and taking possession, the party of the first part shall be under no obligation to care for the goods and property of the party of the second part after the same are removed from the said premises above described; and it is further agreed by the parties hereto that the party of the first part shall not be liable for any damages by reason of the removal of the party of the second part, his family, goods and property, from said described premises and the taking possession thereof.

[fol. 969] The party of the second part promises and agrees to pay to the party of the first part the consideration aforesaid semimonthly, and also agrees that the same may be withheld by the party of the first part out of any wages or other sums of money owing to him by the party of the first part, and that, in case of the termination of said right of occupancy for any cause, no money owing to him from the party of the first part shall be due and payable until he shall have vacated and surrendered to the party of the first part possession of the said premises; and in case the party of the second part shall retain possession of the said premises, or any part thereof, after the termination, for any cause whatsoever, of his right of occupancy thereof he shall without thereby extending his right of occupancy thereof, pay to the party of the first part the sum of $2 for each day he shall so retain possession, the said being hereby agreed upon as liquidated damages for such retention of possession; it being understood that said premises are intended solely for the occupancy of employees of the party of the first part, and that the proper conduct of the business of the party of the first part requires that none but its employees and their families shall occupy the same; and any unpaid compensation for the right of occupancy at the monthly rate aforesaid, and compensation for damages, if any, at the rate hereinbefore agreed upon for the wrongful retention thereof after the termination of the right of occupancy hereby given, shall be retained by the party of the first part out of any such money owing to the party of the second part. The party of the second part hereby ex-

pressly waives any and all provisions of law exempting any property of said party of the second part from execution issued upon any judgment secured against the party of the second part for any sum or sums on account of the use and occupancy of said premises, or as liquidated damages for the wrongful retention of possession thereof.

And the party of the second part further agrees that if, during his employment by said company, he shall enter into possession of any other tenement house of said company, without a written agreement giving the right to occupy the same, such other house shall be held by him upon the terms and conditions of this agreement, except as to the amount of monthly consideration, which shall be that customarily charged by said party of the first part for such other house, or such as may be agreed upon between the parties hereto.

The party of the second part further agrees and covenants to take good and proper care of the said premises, and, at the termination of his right of occupancy, to peaceably surrender possession of the said premises in as good order and condition as the same now are, ordinary wear and tear excepted.

[fol. 970] And it is expressly agreed and understood that this agreement shall not operate or be construed to create the relation of landlord and tenant between the parties hereto under any circumstances whatsoever.

The Pursglove Coal Mining Co., by Joseph Stewart, Chief Clerk. Milton Austin, Employee.

Witness the following signature:
Witness: E. E. Madera.

STATISTICS OF STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES I
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mine
Geological Survey, as Published in Mineral Resources of the Un

	1899			1900				
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	man- on s str
Alabama	1,135	68,925	61	1,056	50,620	48	1,170	
Arkansas	2,041	216,265	106	47	5,040	107	—	
Colorado	504	31,520	62	17	935	55	1,527	
Georgia	—	—	—	—	—	—	—	
Illinois	7,133	267,171	37	3,909	134,433	34	3,740	
Indiana	3,272	132,825	40	3,583	71,282	20	1,027	
Iowa	2,623	72,710	28	1,322	62,333	47	401	
Kansas	1,986	88,798	45	157	3,590	23	60	
Kentucky	837	24,598	29	2,946	90,095	31	933	
Maryland	35	420	12	4,787	504,544	105	—	
Michigan	487	9,547	20	81	1,514	19	—	
Missouri	2,197	117,076	53	632	34,970	55	1,042	
Montana	650	33,800	52	40	1,640	41	285	
New Mexico	—	—	—	—	—	—	766	
North Carolina .	—	—	—	—	—	—	—	
North Dakota ...	—	—	—	—	—	—	32	
Ohio	877	26,394	30	2,035	45,547	22	2,724	
Oklahoma	1,825	281,256	154	110	31,100	283	—	
Pennsylvania ...	15,131	636,160	42	7,574	223,093	29	2,541	
South Dakota ...	—	—	—	—	—	—	—	
Tennessee	1,595	37,085	23	1,559	67,308	43	1,705	
Texas	185	2,775	15	135	2,740	20	113	
Utah	—	—	—	—	—	—	754	
Virginia	—	—	—	—	—	—	175	
Washington	—	—	—	100	3,000	30	—	
West Virginia ..	3,468	76,829	22	1,883	44,318	24	1,438	
Wyoming	—	—	—	—	—	—	160	
Other small States	—	—	—	—	—	—	—	
Total ...	45,981	2,124,154	46	31,973	1,378,102	43	20,593	

a/ NOTE: These figures are based upon replies of operators to the question "Were there any strikes at the m
duration in days (Sundays and holidays excluded)." As the answer is supplied by one party to a contro

	men on strike, etc.	on account of strike, etc.	per man on strike	men on strike, etc.	on account of strike, etc.	per man on strike	men on strike, etc.	on acco strike,
Alabama	1,135	68,925	61	1,056	50,620	48	1,170	14,
Arkansas	2,041	216,265	106	47	5,040	107	—	—
Colorado	504	31,520	62	17	935	55	1,527	86,
Georgia	—	—	—	—	—	—	—	—
Illinois	7,133	267,171	37	3,909	134,433	34	3,740	79,
Indiana	3,272	132,825	40	3,583	71,282	20	1,027	40,
Iowa	2,623	72,710	28	1,322	62,333	47	401	16,
Kansas	1,986	88,798	45	157	3,590	23	60	
Kentucky	837	24,598	29	2,946	90,095	31	933	32,
Maryland	35	420	12	4,787	504,544	105	—	—
Michigan	487	9,547	20	81	1,514	19	—	—
Missouri	2,197	117,076	53	632	34,970	55	1,042	31,
Montana	650	33,800	52	40	1,640	41	285	14,
New Mexico	—	—	—	—	—	—	766	32,
North Carolina .	—	—	—	—	—	—	—	—
North Dakota ...	—	—	—	—	—	—	32	
Ohio	877	26,394	30	2,035	45,547	22	2,724	105,
Oklahoma	1,825	281,256	154	110	31,100	283	—	—
Pennsylvania ...	15,131	636,160	42	7,574	223,093	29	2,541	125,
South Dakota ...	—	—	—	—	—	—	—	—
Tennessee	1,595	37,085	23	1,559	67,308	43	1,705	82,
Texas	185	2,775	15	135	2,740	20	113	
Utah	—	—	—	—	—	—	754	23,
Virginia	—	—	—	—	—	—	175	3,
Washington	—	—	—	100	3,000	30	—	—
West Virginia ..	3,468	76,829	22	1,883	44,318	24	1,438	45,
Wyoming	—	—	—	—	—	—	160	1,
Other small States	—	—	—	—	—	—	—	—
Total ...	45,981	2,124,154	46	31,973	1,378,102	43	20,593	733

a/ NOTE: These figures are based upon replies of operators to the question "Were there any strikes at the mine du duration in days (Sundays and holidays excluded)." As the answer is supplied by one party to a controversy, the opera checked as far as possible against evidence from other sources, such as weekly reports of carloadings by the railroads suspension of 1922 by questioning representatives of the miners' union in certain districts.

The operator is not asked to state the cause of the stoppage, a subject on which his opinion might differ from have been reported as "strikes" which the employees would have considered as "lockouts." By far the most important st wage contracts when the two parties were unable to agree upon the terms of a new contract. Such a stoppage may proper a lockout. For these reasons all stoppages are grouped together under the headings, "Strikes, suspensions, and lockou

Among the most important "suspensions" were those attending the expiration of the wage contracts in 1906, 1908,

Regarding the large number of days lost on account of labor disputes, it does not follow that if there had been for some other cause of non-operation might have intervened to keep the mines idle.

ES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933 a/ Plaintiff's Ex. 66
rom the Annual Coal Reports of the U. S. Bureau of Mines, formerly U. S.
cal Survey, as Published in Mineral Resources of the United States)

1900			1901			1902		
Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
1,056	50,620	48	1,170	14,071	12	6,059	139,783	23
47	5,040	107	—	—	—	14	140	10
17	935	55	1,527	86,045	56	444	20,845	47
—	—	—	—	—	—	—	—	—
3,909	134,433	34	3,740	79,245	21	3,916	65,231	17
3,583	71,282	20	1,027	40,812	39	1,824	23,693	13
1,322	62,333	47	401	16,171	40	363	6,480	18
157	3,590	23	60	300	5	334	17,256	52
2,946	90,095	31	933	32,707	35	1,248	22,184	18
4,787	504,544	105	—	—	—	—	—	—
81	1,514	19	—	—	—	1,935	239,146	124
632	34,970	55	1,042	31,318	30	1,364	61,273	45
40	1,640	41	285	14,175	49	686	7,636	11
—	—	—	766	32,949	43	470	9,820	21
—	—	—	—	—	—	—	—	—
—	—	—	32	224	7	8	8	1
2,035	45,547	22	2,724	105,177	38	3,769	70,534	19
110	31,100	283	—	—	—	150	9,000	60
7,574	223,093	29	2,541	125,116	49	12,580	264,862	21
—	—	—	—	—	—	—	—	—
1,559	67,308	43	1,705	82,730	49	1,904	136,347	72
135	2,740	20	113	226	2	50	50	1
—	—	—	754	23,055	30	—	—	—
—	—	—	175	3,200	18	205	5,875	29
100	3,000	30	—	—	—	—	—	—
1,883	44,318	24	1,438	45,161	31	18,129	1,362,054	75
—	—	—	160	1,120	7	—	—	—
—	—	—	—	—	—	—	—	—
31,973	1,378,102	43	20,593	733,802	35	55,452	2,462,217	44

ors to the question "Were there any strikes at the mine during the year? If so, give number of men on strike and

1,056	50,620	48	1,170	14,071	12	6,059	139,783	23
47	5,040	107	—	—	—	14	140	10
17	935	55	1,527	86,045	56	444	20,845	47
—	—	—	—	—	—	—	—	—
3,909	134,433	34	3,740	79,245	21	3,916	65,231	17
3,583	71,282	20	1,027	40,812	39	1,824	23,693	13
1,322	62,333	47	401	16,171	40	363	6,480	18
157	3,590	23	60	300	5	334	17,256	52
2,946	90,095	31	933	32,707	35	1,248	22,184	18
4,787	504,544	105	—	—	—	—	—	—
81	1,514	19	—	—	—	1,935	239,146	124
632	34,970	55	1,042	31,318	30	1,364	61,273	45
40	1,640	41	285	14,175	49	686	7,636	11
—	—	—	766	32,949	43	470	9,820	21
—	—	—	—	—	—	—	—	—
—	—	—	32	224	7	8	8	1
2,035	45,547	22	2,724	105,177	38	3,769	70,534	19
110	31,100	283	—	—	—	150	9,000	60
7,574	223,093	29	2,541	125,116	49	12,580	264,862	21
—	—	—	—	—	—	—	—	—
1,559	67,308	43	1,705	82,730	49	1,904	136,347	72
135	2,740	20	113	226	2	50	50	1
—	—	—	754	23,055	30	—	—	—
—	—	—	175	3,200	18	205	5,875	29
100	3,000	30	—	—	—	—	—	—
1,883	44,318	24	1,438	45,161	31	18,129	1,362,054	75
—	—	—	160	1,120	7	—	—	—
—	—	—	—	—	—	—	—	—
31,973	1,378,102	43	20,593	733,802	35	55,452	2,462,217	44

tors to the question "Were there any strikes at the mine during the year? If so, give number of men on strike and answer is supplied by one party to a controversy, the operators' statements in the case of major strikes have been ces, such as weekly reports of carloadings by the railroads, accounts in newspapers and trade journals, and during the iners' union in certain districts.

stoppage, a subject on which his opinion might differ from that of his employees, and it is evident that some stoppages ave considered as "lockouts." By far the most important stoppages have been those occurring at the expiration of the on the terms of a new contract. Such a stoppage may properly be termed as a "suspension" rather than either a strike or ether under the headings, "Strikes, suspensions, and lockouts."

ending the expiration of the wage contracts in 1906, 1908, 1910, 1912, 1914, 1922, 1927, 1928, and 1932.

f labor disputes, it does not follow that if there had been no strike the number of days worked would have been larger, to keep the mines idle.

STATISTICS OF STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mines
Geological Survey, as Published in Mineral Resources of the Uni

	1903			1904			19	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Tot man-day on acco strike,
Alabama	7,319	231,112	32	9,518	762,032	80	667	3
Arkansas	398	2,078	5	76	1,424	19	625	
Colorado	7,103	407,909	57	3,865	481,482	125	—	
Georgia	—	—	—	—	—	—	—	
Illinois	3,772	70,731	19	16,983	156,528	9	15,289	32
Indiana	2,680	46,566	17	1,061	22,963	18	981	1
Iowa	1,143	11,365	99	8,303	173,781	21	1,774	1
Kansas	328	2,516	8	186	1,214	7	1,482	1
Kentucky	599	13,717	22	3,781	144,245	39	923	6
Maryland	120	6,045	5	—	—	—	—	
Michigan	75	825	11	564	2,402	4	—	
Missouri	1,306	13,892	11	1,844	26,312	14	435	
Montana	—	—	—	792	37,140	47	200	3
New Mexico	54	710	13	556	73,090	131	—	
North Carolina	—	—	—	—	—	—	—	
North Dakota	35	340	10	175	6,300	36	—	
Ohio	4,115	65,149	16	11,412	514,658	45	3,250	4
Oklahoma	448	1,928	4	488	5,175	11	397	
Pennsylvania	12,805	321,925	25	9,336	576,353	62	5,686	18
South Dakota	—	—	—	—	—	—	—	
Tennessee	1,639	36,021	22	2,391	170,680	71	150	
Texas	1,055	24,460	23	55	585	11	25	
Utah	350	9,800	28	—	—	—	6	
Virginia	—	—	—	—	—	—	—	
Washington	200	6,600	33	365	25,020	69	—	
West Virginia	1,524	63,212	41	3,682	167,343	45	462	1
Wyoming	413	4,130	10	—	—	—	192	
Other small States	—	—	—	—	—	—	—	
	47,481	1,341,031	28	75,433	3,348,727	44	32,544	76

RIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933 Plaintiff's Ex. 66
ed from the Annual Coal Reports of the U. S. Bureau of Mines, formerly U. S.
logical Survey, as Published in Mineral Resources of the United States)

1904			1905			1906		
Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
9,518	762,032	80	667	33,262	50	549	6,576	12
76	1,424	19	625	7,806	12	3,828	291,095	76
3,865	481,482	125	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
16,983	156,528	9	15,289	321,967	21	49,792	2,900,525	58
1,061	22,963	18	981	12,528	13	15,875	995,217	63
8,303	173,781	21	1,774	10,353	6	7,969	204,860	28
186	1,214	7	1,482	14,686	10	11,827	709,422	59
3,781	144,245	39	923	62,651	68	1,242	44,812	36
—	—	—	—	—	—	30	300	10
564	2,402	4	—	—	—	3,340	294,630	88
1,844	26,312	14	435	6,788	16	6,212	483,790	78
792	37,140	47	200	36,000	180	230	7,030	31
556	73,090	131	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
175	6,300	36	—	—	—	37	92	2
11,412	514,658	45	3,250	49,495	15	37,636	2,687,288	71
488	5,175	11	397	3,509	9	7,372	535,504	72
9,336	576,353	62	5,686	186,250	33	59,593	3,941,835	66
—	—	—	—	—	—	—	—	—
2,391	170,680	71	150	4,770	32	180	1,185	7
55	585	11	25	375	15	1,260	9,245	7
—	—	—	6	6	1	—	—	—
—	—	—	—	—	—	—	—	—
365	25,020	69	—	—	—	—	—	—
3,682	167,343	45	462	12,111	26	4,101	123,724	30
—	—	—	192	192	1	231	5,775	25
—	—	—	—	—	—	—	—	—
75,433	3,348,727	44	32,544	762,749	234	211,304	13,242,905	63

STATISTICS OF STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN T
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mines,
Geological Survey, as Published in Mineral Resources of the Unite

	1907			1908			19	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	To man-da on acc strike
Alabama	80	3,600	45	8,397	373,513	44	—	
Arkansas	1,185	35,835	30	4,037	387,841	96	1,443	
Colorado	215	6,378	30	768	16,646	22	55	
Georgia	—	—	—	—	—	—	—	
Illinois	5,255	35,191	7	47,456	1,737,611	37	2,335	
Indiana	3,176	42,842	13	7,076	157,899	22	36	
Iowa	1,621	8,265	5	5,248	121,087	23	2,036	
Kansas	923	16,957	18	11,155	665,224	60	4,715	
Kentucky	1,325	53,916	41	1,002	26,941	27	275	
Maryland	510	13,770	27	—	—	—	25	
Michigan	265	1,325	5	300	4,800	16	527	
Missouri	777	8,222	11	6,350	355,138	56	957	
Montana	30	600	20	556	9,201	17	110	
New Mexico	—	—	—	—	—	—	—	
North Carolina	—	—	—	—	—	—	—	
North Dakota	82	736	9	104	1,620	16	75	
Ohio	6,367	110,324	17	21,084	567,450	27	2,375	1
Oklahoma	669	17,092	26	6,929	398,251	57	1,576	
Pennsylvania	6,447	59,834	9	18,780	375,569	20	5,824	2
South Dakota	—	—	—	—	—	—	—	
Tennessee	284	4,725	17	349	11,441	33	277	
Texas	270	1,610	6	169	338	2	80	
Utah	148	592	4	—	—	—	—	
Virginia	—	—	—	—	—	—	—	
Washington	484	8,544	18	226	67,800	300	123	
West Virginia	617	9,749	16	501	71,992	144	1,919	
Wyoming	1,785	22,060	12	4,658	99,576	21	—	
Other small States 1/	25	225	9	—	—	—	—	
Total	32,540	462,392	14	145,145	5,449,938	38	24,763	7

IKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933. Plaintiff's Ex. 66
d from the Annual Coal Reports of the U. S. Bureau of Mines, formerly U. S.
logical Survey, as Published in Mineral Resources of the United States).

	1908			1909			1910		
ke st ke	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
45	8,397	373,513	44	—	—	—	25	1,250	50
30	4,037	387,841	96	1,443	41,836	29	4,873	713,210	146
30	768	16,646	22	55	1,250	23	2,044	195,558	96
—	—	—	—	—	—	—	270	2,970	11
7	47,456	1,737,611	37	2,335	90,720	38	67,218	9,133,953	136
13	7,076	157,899	22	36	720	20	12,638	423,894	34
5	5,248	121,087	23	2,036	12,504	6	9,209	408,563	44
18	11,155	665,224	60	4,715	71,566	15	10,346	1,578,027	153
41	1,002	26,941	27	275	16,500	60	1,475	15,197	10
27	—	—	—	25	175	7	—	—	—
5	300	4,800	16	527	23,002	44	1,663	86,789	52
11	6,350	355,138	56	957	6,593	7	7,774	1,218,599	157
20	556	9,201	17	110	1,100	10	345	38,260	111
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
9	104	1,620	16	75	525	7	—	—	—
17	21,084	567,450	27	2,375	139,434	59	24,746	1,334,631	54
26	6,929	398,251	57	1,576	11,368	7	8,213	1,247,828	152
9	18,780	375,569	20	5,824	260,381	45	60,098	2,700,746	45
—	—	—	—	—	—	—	—	—	—
17	349	11,441	33	277	9,295	34	—	—	—
6	169	338	2	80	4,800	60	1,776	108,230	61
4	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
18	226	67,800	300	123	2,300	19	101	303	3
16	501	71,992	144	1,919	29,565	15	1,630	13,985	9
12	4,658	99,576	21	—	—	—	1,196	12,792	11
9	—	—	—	—	—	—	—	—	—
14	145,145	5,449,938	38	24,763	723,634	29	215,640	19,234,785	89

STATISTICS OF STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN T
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mines,
Geological Survey, as Published in Mineral Resources of the Unite

	1911			1912			1	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	T man-d on ac strik
Alabama	210	1,260	6	384	12,323	32	1,048	
Arkansas	665	4,615	7	403	37,685	94	1,221	
Colorado	150	32,375	216	—	—	—	7,324	5
Georgia	—	—	—	—	—	—	—	
Illinois	5,543	100,588	18	60,505	2,026,526	33	11,861	6
Indiana	4,577	146,636	32	15,400	795,887	52	2,657	
Iowa	1,622	31,870	20	8,455	370,449	44	721	
Kansas	984	8,507	9	2,088	13,487	65	3,178	
Kentucky	1,080	34,008	32	2,759	79,685	29	1,029	
Maryland	—	—	—	347	3,228	9	200	
Michigan	—	—	—	2,028	101,424	50	180	
Missouri	504	24,216	48	952	55,022	58	918	
Montana	529	8,114	15	869	8,445	10	1,094	
New Mexico	—	—	—	—	—	—	8	
North Carolina	—	—	—	—	—	—	—	
North Dakota	34	69	2	10	20	2	—	
Ohio	9,530	350,039	37	27,200	895,777	32	10,029	2
Oklahoma	444	15,106	34	860	12,109	14	1,696	1
Pennsylvania	5,601	148,124	26	22,538	538,248	24	17,244	2
South Dakota	—	—	—	—	—	—	—	
Tennessee	163	1,630	10	670	20,011	30	857	
Texas	60	300	5	238	1,724	7	—	
Utah	208	624	3	—	—	—	5	
Virginia	—	—	—	—	—	—	—	
Washington	2,099	22,215	10	807	31,347	39	1,239	
West Virginia	1,510	16,483	11	12,165	606,588	50	8,800	3
Wyoming	—	—	—	360	3,425	10	—	
Other small States 1/	—	—	—	60	420	7	—	
	35,513	946,779	27	159,098	5,613,830	35	71,309	2,5

KES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933. Plaintiff's Ex. 66

from the Annual Coal Reports of the U. S. Bureau of Mines, formerly U. S.
gical Survey, as Published in Mineral Resources of the United States)

	1912			1913			1914		
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
6	384	12,323	32	1,048	27,041	26	320	3,940	12
7	403	37,685	94	1,221	32,481	27	1,415	159,854	113
16	—	—	—	7,324	552,082	75	4,418	1,090,025	247
—	—	—	—	—	—	—	—	—	—
18	60,505	2,026,526	33	11,861	655,622	55	23,506	970,466	41
32	15,400	795,887	52	2,657	44,143	17	8,052	302,855	38
20	8,455	370,449	44	721	13,538	19	2,642	76,791	29
9	2,088	13,487	65	3,178	28,936	9	2,673	45,257	17
32	2,759	79,685	29	1,029	18,638	18	2,250	82,919	37
—	347	3,228	9	200	400	2	91	1,547	17
—	2,028	101,424	50	180	1,260	7	—	—	—
48	952	55,022	58	918	31,251	34	1,162	56,536	49
15	869	8,445	10	1,094	6,682	6	171	1,271	7
—	—	—	—	8	1,040	130	—	—	—
—	—	—	—	—	—	—	—	—	—
2	10	20	2	—	—	—	—	—	—
37	27,200	895,777	32	10,029	263,234	26	40,577	6,452,762	159
14	860	12,109	14	1,696	135,274	80	1,286	39,500	31
26	22,538	538,248	24	17,244	274,296	16	36,613	1,052,005	29
—	—	—	—	—	—	—	—	—	—
10	670	20,011	30	857	42,966	50	—	—	—
5	238	1,724	7	—	—	—	221	693	3
3	—	—	—	5	1,300	260	150	1,800	12
—	—	—	—	—	—	—	—	—	—
10	807	31,347	39	1,239	60,145	49	459	25,410	55
11	12,165	606,588	50	8,800	377,405	43	9,330	466,768	50
—	360	3,425	10	—	—	—	248	2,727	11
—	60	420	7	—	—	—	21	798	38
27	159,098	5,613,830	35	71,309	2,567,734	36	135,605	10,833,924	80

STATISTICS OF STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mines, fo
Geological Survey, as Published in Mineral Resources of the United

	1915			1916			19	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	T man-d on ac strik
Alabama	175	1,290	7	300	920	3	1,835	
Arkansas	925	20,304	22	1,009	30,847	31	2,417	
Colorado	90	13,500	150	38	82	2	1,664	
Georgia	—	—	—	—	—	—	—	
Illinois	5,251	276,458	53	5,043	55,416	11	38,781	
Indiana	1,472	21,361	15	8,154	154,974	19	11,914	
Iowa	1,067	5,229	5	2,244	32,587	15	3,275	
Kansas	1,716	17,425	10	6,306	152,838	24	7,312	
Kentucky	1,045	16,455	16	4,830	269,859	56	9,348	
Maryland	—	—	—	181	6,546	36	1,523	
Michigan	—	—	—	1,416	18,189	13	163	
Missouri	939	4,597	5	2,331	14,837	6	2,175	
Montana	183	1,084	6	396	1,530	4	1,063	
New Mexico	—	—	—	—	—	—	85	
North Carolina	—	—	—	—	—	—	—	
North Dakota	—	—	—	26	78	3	82	
Ohio	15,048	1,722,013	114	7,594	156,689	21	7,710	
Oklahoma	1,013	4,485	4	6,240	126,452	20	1,668	
Pennsylvania	5,583	78,446	14	36,276	1,200,479	33	23,655	
South Dakota	—	—	—	—	—	—	—	
Tennessee	—	—	—	350	3,784	11	4,448	
Texas	230	760	3	2,218	62,905	28	75	
Utah	—	—	—	181	543	3	212	
Virginia	7	7	1	—	—	—	232	
Washington	—	—	—	1,203	13,304	11	192	
West Virginia	1,902	66,698	35	4,540	86,352	19	6,166	
Wyoming	219	2,628	12	276	308	1	—	
Other small States 1/	—	—	—	—	—	—	25	

	1915			1916			19	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	T man-d on ac strik
Alabama	175	1,290	7	300	920	3	1,835	
Arkansas	925	20,304	22	1,009	30,847	31	2,417	
Colorado	90	13,500	150	38	82	2	1,664	
Georgia	—	—	—	—	—	—	—	
Illinois	5,251	276,458	53	5,043	55,416	11	38,781	
Indiana	1,472	21,361	15	8,154	154,974	19	11,914	
Iowa	1,067	5,229	5	2,244	32,587	15	3,275	
Kansas	1,716	17,425	10	6,306	152,838	24	7,312	
Kentucky	1,045	16,455	16	4,830	269,859	56	9,348	
Maryland	—	—	—	181	6,546	36	1,523	
Michigan	—	—	—	1,416	18,189	13	163	
Missouri	939	4,597	5	2,331	14,837	6	2,175	
Montana	183	1,084	6	396	1,530	4	1,063	
New Mexico	—	—	—	—	—	—	85	
North Carolina	—	—	—	—	—	—	—	
North Dakota	—	—	—	26	78	3	82	
Ohio	15,048	1,722,013	114	7,594	156,689	21	7,710	
Oklahoma	1,013	4,485	4	6,240	126,452	20	1,668	
Pennsylvania	5,583	78,446	14	36,276	1,200,479	33	23,655	
South Dakota	—	—	—	—	—	—	—	
Tennessee	—	—	—	350	3,784	11	4,448	
Texas	230	760	3	2,218	62,905	28	75	
Utah	—	—	—	181	543	3	212	
Virginia	7	7	1	—	—	—	232	
Washington	—	—	—	1,203	13,304	11	192	
West Virginia	1,902	66,698	35	4,540	86,352	19	6,166	
Wyoming	219	2,628	12	276	308	1	—	
Other small States 1/	—	—	—	—	—	—	25	
Total	36,865	2,252,740	61	91,152	2,389,519	26	126,020	2,

1/ Oregon.

...S, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933 Plaintiff's Ex. 66
...from the Annual Coal Reports of the U. S. Bureau of Mines, formerly U. S.
...ical Survey, as Published in Mineral Resources of the United States)

...ge ...ost ...n ...ike	1916			1917			1918		
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
7	300	920	3	1,835	10,220	6	1,952	3,259	2
22	1,009	30,847	31	2,417	27,315	11	1,207	4,292	4
150	38	82	2	1,664	7,292	4	464	2,318	5
—	—	—	—	—	—	—	-230	1,610	7
53	5,043	55,416	11	38,781	464,511	12	10,251	74,850	7
15	8,154	154,971	19	11,914	74,695	6	8,083	51,015	6
5	2,244	32,587	15	3,275	18,407	6	997	4,774	5
10	6,306	152,838	24	7,312	128,514	18	4,675	25,047	5
16	4,830	269,859	56	9,348	425,725	46	1,226	15,318	12
—	181	6,546	36	1,523	24,605	16	2,517	5,402	2
—	1,416	18,189	13	163	1,964	12	1,367	18,194	13
5	2,331	14,837	6	2,175	31,767	15	1,191	5,800	5
6	396	1,530	4	1,063	23,680	22	218	218	1
—	—	—	—	85	775	9	—	—	—
—	—	—	—	—	—	—	—	—	—
—	26	78	3	82	811	10	22	166	8
114	7,594	156,689	21	7,710	56,875	7	4,993	44,837	9
4	6,240	126,452	20	1,668	37,301	22	630	12,294	20
14	36,276	1,200,479	33	23,655	544,322	23	12,852	112,929	9
—	—	—	—	—	—	—	—	—	—
—	350	3,784	11	4,448	192,730	43	835	2,454	3
3	2,218	62,905	28	75	260	3	55	550	10
—	181	543	3	212	848	4	30	30	1
1	—	—	—	232	2,283	10	523	10,241	20
—	1,203	13,304	11	192	840	4	75	1,275	17
35	4,540	86,352	19	6,166	111,479	18	5,712	42,009	7
12	276	308	1	—	—	—	—	—	—
—	—	—	—	25	25	1	—	—	—

	1916			1917			1918			
s st ks	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	
7	300	920	3	1,835	10,220	6	1,952	3,259	2	
22	1,009	30,847	31	2,417	27,315	11	1,207	4,292	4	
50	38	82	2	1,664	7,292	4	464	2,318	5	
-	—	—	—	—	—	—	-230	1,610	7	
53	5,043	55,416	11	38,781	464,511	12	10,251	74,850	7	
15	8,154	154,974	19	11,914	74,695	6	8,083	51,015	6	
5	2,244	32,587	15	3,275	18,407	6	997	4,774	5	
10	6,306	152,838	24	7,312	128,514		4,675	25,047	5	
16	4,830	269,859	56	9,348	425,725	4	1,226	15,318	12	
-	181	6,546	36	1,523	24,605	16	2,517	5,402	2	
-	1,416	18,189	13	163	1,964	12	1,367	18,194	13	
5	2,331	14,837	6	2,175	31,767	15	1,191	5,800	5	
6	396	1,530	4	1,063	23,680	22	218	218	1	
-	--	--	--	85	775	9	—	--	—	
-	—	--	—	—	—	—	—	—	—	
-	26	78	3	82	811	10	22	166	8	
14	7,594	156,689	21	7,710	56,875	7	4,993	44,837	9	
4	6,240	126,452	20	1,668	37,301	22	630	12,294	20	
14	36,276	1,200,479	33	23,655	544,322	23	12,852	112,929	9	
-	—	—	—	—	—	—	—	—	—	
-	350	3,784	11	4,448	192,730	43	835	2,454	3	
3	2,218	62,905	28	75	260	3	55	550	10	
-	181	543	3	212	848	4	30	30	1	
1	--	—	—	232	2,283	10	523	10,241	20	
-	1,203	13,304	11	192	840	4	75	1,275	17	
35	4,540	86,352	19	6,166	111,478	18	5,712	42,009	7	
12	276	308	1	—	—	—	--	—	—	
-	—	—	—	25	25	1	—	—	—	
61	91,152	2,389,519	26	126,020	2,187,244	17	60,105	438,882	7	

STATISTICS OF STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mines,
Geological Survey, as Published in Mineral Resources of the Uni

	1919			1920			1	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	man- on a stri
Alabama	13,431	269,242	20	8,490	800,519	94	2,329	
Arkansas	3,681	161,069	44	956	28,015	29	1,677	
Colorado	6,186	89,392	14	2,012	18,240	9	2,497	
Georgia	168	2,016	12	—	—	—	—	
Illinois	81,600	3,558,094	44	68,481	948,408	14	18,088	
Indiana	28,431	1,135,013	40	19,068	411,991	22	17,634	
Iowa	11,350	433,884	38	4,966	24,366	5	897	
Kansas	9,104	531,791	58	5,461	161,485	30	7,285	
Kentucky	22,598	696,165	31	9,192	312,460	34	1,789	
Maryland	5,337	143,523	27	1,733	25,514	15	123	
Michigan	2,087	153,351	73	1,659	24,993	15	780	
Missouri	8,315	458,588	55	1,841	36,015	20	2,089	
Montana	3,833	153,159	40	377	6,952	18	92	
New Mexico	1,183	18,307	15	—	—	—	425	
North Carolina	—	—	—	—	—	—	—	
North Dakota	576	4,281	7	49	473	9	15	
Ohio	42,724	1,717,426	40	17,333	245,314	14	17,682	
Oklahoma	7,963	317,538	40	2,267	24,053	11	1,520	
Pennsylvania	97,089	3,765,144	39	27,728	479,708	17	14,895	
South Dakota	—	—	—	—	—	—	—	
Tennessee	10,199	334,315	33	202	1,478	7	638	
Texas	1,747	52,858	30	824	9,737	12	—	
Utah	317	4,866	15	113	791	7	100	
Virginia	947	22,956	24	48	1,736	36	—	
Washington	4,369	186,942	43	201	22,962	114	802	
West Virginia	48,062	1,158,094	24	12,340	511,225	41	7,198	
Wyoming	6,982	157,843	23	238	2,722	11	591	
Other small States	—	—	—	—	—	—	—	
Total	418,279	15,525,857	37	185,579	4,099,157	22	99,146	2

IKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933.
d from the Annual Coal Reports of the U. S. Bureau of Mines, Formerly U. S.
gical Survey, as Published in Mineral Resources of the United States)

Plaintiff's Ex. 66

t e	1920			1921			1922		
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
0	8,490	800,519	94	2,329	157,401	68	46	167	4
4	956	28,015	29	1,677	17,400	10	3,691	435,507	118
4	2,012	18,240	9	2,497	72,830	29	6,672	527,250	79
2	—	—	—	—	—	—	—	—	—
4	68,481	948,408	14	18,088	226,112	13	93,584	11,547,829	123
0	19,068	411,991	22	17,634	321,593	18	31,721	3,924,396	124
8	4,966	24,366	5	897	1,840	2	12,192	1,479,497	121
8	5,461	161,485	30	7,285	538,811	74	6,515	847,075	130
1	9,192	312,460	34	1,789	64,448	36	10,270	605,441	59
7	1,733	25,514	15	123	4,463	36	4,446	688,206	155
3	1,659	24,993	15	780	2,826	4	2,062	247,919	120
5	1,841	36,015	20	2,089	50,108	24	7,535	939,192	125
0	377	6,952	18	92	2,035	22	3,361	428,678	128
5	—	—	—	425	1,700	4	585	75,135	128
-	—	—	—	—	—	—	—	—	—
7	49	473	9	15	225	15	578	49,238	85
0	17,333	245,314	14	17,682	176,605	10	46,283	5,502,885	118
0	2,267	24,053	11	1,520	12,231	8	5,872	773,127	132
9	27,728	479,708	17	14,895	302,525	20	155,604	18,388,895	118
-	—	—	—	—	—	—	—	—	—
3	202	1,478	7	638	17,350	27	5,864	482,231	82
0	824	9,737	12	—	—	—	693	13,867	20
5	113	791	7	100	200	2	2,111	212,896	101
4	48	1,736	36	—	—	—	240	2,200	9
3	201	22,962	114	802	139,126	173	2,225	299,861	135
4	12,340	511,225	41	7,198	170,017	24	49,832	5,348,298	107
3	238	2,722	11	591	2,978	5	8,607	1,054,227	122
-	—	—	—	—	—	—	—	—	—
7	185,579	4,099,157	22	99,146	2,282,824	23	460,589	53,874,017	117

STATISTICS OF STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mines, f
Geological Survey, as Published in Mineral Resources of the United

	1923			1924			19	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	To man-day on acc strike
Alabama	—	—	—	—	—	—	—	
Arkansas	324	9,009	28	1,076	29,272	27	560	
Colorado	—	—	—	120	840	7	595	
Georgia	—	—	—	—	—	—	—	
Illinois	7,474	95,458	13	4,217	50,101	12	4,870	
Indiana	10,765	104,604	10	7,699	159,743	21	7,919	
Iowa	1,946	19,874	10	986	16,445	17	1,267	
Kansas	949	24,741	26	2,706	118,918	44	530	
Kentucky	2,699	92,035	34	8,938	1,735,739	194	1,954	1
Maryland	2,686	359,920	134	168	504	3	—	
Michigan	786	3,992	5	425	1,525	4	725	
Missouri	312	10,857	35	1,580	76,660	49	110	
Montana	25	25	1/	17	53	3	—	
New Mexico	—	—	—	—	—	—	—	
North Carolina	—	—	—	—	—	—	—	
North Dakota	85	6,933	82	—	—	—	—	
Ohio	16,486	203,161	12	10,256	217,752	21	6,572	17
Oklahoma	1,020	8,211	8	1,318	144,607	110	352	
Pennsylvania	10,984	157,130	14	8,793	361,226	41	7,414	23
South Dakota	—	—	—	—	—	—	—	
Tennessee	572	24,766	43	2,134	244,945	115	250	
Texas	137	18,141	132	—	—	—	87	
Utah	—	—	—	58	310	5	280	
Virginia	—	—	—	—	—	—	—	
Washington	1,754	50,681	29	—	—	—	—	
West Virginia	2,625	49,587	19	7,688	1,060,478	138	4,956	37
Wyoming	—	—	—	—	—	—	—	
Other small States 2/	—	—	—	—	—	—	—	
Total	61,629	1,239,125	20	58,179	4,219,118	73	38,441	1,16

1/ One-half day or less.

2/ The State affected in 1926 was not designated in the published report.

RIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933

ed from the Annual Coal Reports of the U. S. Bureau of Mines, formerly U. S. logical Survey, as Published in Mineral Resources of the United States)

Plaintiff's Ex. 66

	1924			1925			1926		
ge lost n rike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
—	—	—	—	—	—	—	—	—	—
28	1,076	29,272	27	560	41,928	75	205	1,635	8
—	120	840	7	595	6,943	12	—	—	—
—	—	—	—	—	—	—	—	—	—
13	4,217	50,101	12	4,870	25,180	5	987	12,609	13
10	7,699	159,743	21	7,919	96,963	12	10,450	179,375	17
10	986	16,445	17	1,267	3,740	3	932	19,510	21
26	2,706	118,918	44	530	8,080	15	118	1,560	13
34	8,938	1,735,739	194	1,954	162,534	83	688	13,170	19
134	168	504	3	—	—	—	603	3,289	5
5	425	1,525	4	725	5,575	8	225	225	1
35	1,580	76,660	49	110	1,287	12	64	760	12
1	17	53	3	—	—	—	225	450	2
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
82	—	—	—	—	—	—	—	—	—
12	10,256	217,752	21	6,572	170,208	26	8,857	85,118	12
8	1,318	144,607	110	352	16,773	48	20	20	1
14	8,793	361,226	41	7,414	234,389	32	4,922	272,918	55
—	—	—	—	—	—	—	—	—	—
43	2,134	244,945	115	250	2,350	9	300	300	1
132	—	—	—	87	261	3	—	—	—
	58	310	5	280	10,920	39	—	—	—
—	—	—	—	—	—	—	—	—	—
29	—	—	—	—	—	—	—	—	—
19	7,688	1,060,478	138	4,956	376,399	76	2,692	126,242	47
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	60	120	2
20	58,179	4,219,118	73	38,441	1,163,530	30	29,348	717,301	24

the published report.

STATISTICS ON STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNI
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mines, forme
Geological Survey, as Published in Mineral Resources of the United Sta

	1927 1/			1928			192	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days on accou strike,
Alabama	—	—	—	—	—	—	—	
Arkansas	389	41,810	107	—	—	—	95	
Colorado	5,429	267,210	49	1,594	57,184	36	—	
Georgia	—	—	—	—	—	—	—	
Illinois	66,992	10,018,566	150	21,815	1,463,409	67	10,162	
Indiana	17,303	2,345,279	136	3,216	91,842	29	3,851	
Iowa	5,624	815,764	145	1,986	68,623	35	810	
Kansas	3,014	390,711	130	1,525	168,766	111	106	
Kentucky	1,824	24,756	14	1,130	14,124	12	561	
Maryland	—	—	—	—	—	—	—	
Michigan	470	1,510	3	430	6,320	15	762	
Missouri	2,662	336,972	127	941	67,585	72	211	
Montana	—	—	—	1,219	9,178	8	—	
New Mexico	—	—	—	—	—	—	—	
North Carolina	—	—	—	—	—	—	—	
North Dakota	—	—	—	—	—	—	—	
Ohio	1/ 26,250	5,605,443	214	9,222	1,576,760	171	943	
Oklahoma	163	25,428	156	—	—	—	—	
Pennsylvania	1/ 41,692	6,591,870	158	5,999	658,111	110	313	
South Dakota	—	—	—	—	—	—	—	
Tennessee	50	3,000	60	265	795	3	200	
Texas	—	—	—	—	—	—	—	
Utah	—	—	—	—	—	—	—	
Virginia	—	—	—	—	—	—	110	
Washington	—	—	—	—	—	—	—	
West Virginia	982	47,548	48	210	18,650	89	—	
Wyoming	—	—	—	1,190	3,057	3	151	
Other small States	—	—	—	—	—	—	—	
Total	172,844	26,515,867	153	50,742	4,204,404	83	18,275	1

1/ This table is based on statements from the operators. The figures are compiled in the same way as in previous r
strike of 1927, they tend to understate the extent of the strike, and the number of coal miners who were idle duri
ly true of Pennsylvania, and Ohio. For example, men evicted from company houses and replaced in the mines by

	1927 1/			1928			192	
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike,
Alabama	—	—	—	—	—	—	—	—
Arkansas	389	41,810	107	—	—	—	95	
Colorado	5,429	267,210	49	1,594	57,184	36	—	—
Georgia	—	—	—	—	—	—	—	—
Illinois	66,992	10,018,566	150	21,815	1,463,409	67	10,162	6
Indiana	17,303	2,345,279	136	3,216	91,842	29	3,851	5
Iowa	5,624	815,764	145	1,986	68,623	35	810	
Kansas	3,014	390,711	130	1,525	168,766	111	106	
Kentucky	1,824	24,756	14	1,130	14,124	12	561	
Maryland	—	—	—	—	—	—	—	—
Michigan	470	1,510	3	430	6,320	15	762	
Missouri	2,662	336,972	127	941	67,585	72	211	
Montana	—	—	—	1,219	9,178	8	—	—
New Mexico	—	—	—	—	—	—	—	—
North Carolina	—	—	—	—	—	—	—	—
North Dakota	—	—	—	—	—	—	—	—
Ohio	1/ 26,250	5,605,443	214	9,222	1,576,760	171	943	46
Oklahoma	163	25,428	156	—	—	—	—	—
Pennsylvania	1/ 41,692	6,591,870	158	5,999	658,111	110	313	
South Dakota	—	—	—	—	—	—	—	—
Tennessee	50	3,000	60	265	795	3	200	
Texas	—	—	—	—	—	—	—	—
Utah	—	—	—	—	—	—	—	—
Virginia	—	—	—	—	—	—	110	
Washington	—	—	—	—	—	—	—	—
West Virginia	982	47,548	48	210	18,650	89	—	—
Wyoming	—	—	—	1,190	3,057	3	151	
Other small States	—	—	—	—	—	—	—	—
Total	172,844	26,515,867	153	50,742	4,204,404	83	18,275	19

1/ This table is based on statements from the operators. The figures are compiled in the same way as in previous re the strike of 1927, they tend to understate the extent of the strike, and the number of coal miners who were idle durin especially true of Pennsylvania, and Ohio. For example, men evicted from company houses and replaced in the mines by o striking his mine, even though living in tents or barracks erected by the union. Many mines reopened after three or fo before, but considering the strike over as far as they were concerned. In the Pennsylvania bituminous fields the numbe the number in December was 126,239.

SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933 Plaintiff's Ex. 66
(From the Annual Coal Reports of the U. S. Bureau of Mines, formerly U. S. Geological Survey, as Published in Mineral Resources of the United States)

1928			1929			1930		
Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
—	—	—	—	—	—	—	—	—
—	—	—	95	2,177	23	—	—	—
1,594	57,184	36	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
21,815	1,463,409	67	10,162	68,155	7	9,483	348,779	37
3,216	91,842	29	3,851	58,553	15	2,008	32,003	16
1,986	68,623	35	810	2,434	3	591	3,754	6
1,525	168,766	111	106	3,341	32	—	—	—
1,130	14,124	12	561	4,286	8	6,436	562,067	87
—	—	—	—	—	—	—	—	—
430	6,320	15	762	3,894	5	630	2,560	4
941	67,585	72	211	633	3	50	700	14
1,219	9,178	8	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
9,222	1,576,760	171	943	46,165	49	1,143	12,583	11
—	—	—	—	—	—	—	—	—
5,999	658,111	110	313	4,073	13	924	14,689	16
—	—	—	—	—	—	—	—	—
265	795	3	200	1,200	6	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	110	880	8	—	—	—
—	—	—	—	—	—	—	—	—
210	18,650	89	—	—	—	1,523	13,215	9
1,190	3,057	3	151	151	1	10	10	1
—	—	—	—	—	—	—	—	—
50,742	4,204,404	83	18,275	195,942	11	22,798	990,360	43

. The figures are compiled in the same way as in previous reports, but owing to the unusual conditions attending the strike, and the number of coal miners who were idle during the year primarily because of the strike. This is [illegible] replaced in the mines by other men would not be counted by the operator as

1928			1929			1930		
Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
—	—	—	—	—	—	—	—	—
—	—	—	95	2,177	23	—	—	—
1,594	57,184	36	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
21,815	1,463,409	67	10,162	68,155	7	9,483	348,779	37
3,216	91,842	29	3,851	58,553	15	2,008	32,003	16
1,986	68,623	35	810	2,434	3	591	3,754	6
1,525	168,766	111	106	3,341	32	—	—	—
1,130	14,124	12	561	4,286	8	6,436	562,067	87
—	—	—	—	—	—	—	—	—
430	6,320	15	762	3,894	5	630	2,560	4
941	67,585	72	211	633	3	50	700	14
1,219	9,178	8	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
9,222	1,576,760	171	943	46,165	49	1,143	12,583	11
—	—	—	—	—	—	—	—	—
5,999	658,111	110	313	4,073	13	924	14,689	16
—	—	—	—	—	—	—	—	—
265	795	3	200	1,200	6	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
—	—	—	110	880	8	—	—	—
—	—	—	—	—	—	—	—	—
210	18,650	89	—	—	—	1,523	13,215	9
1,190	3,057	3	151	151	1	10	10	1
—	—	—	—	—	—	—	—	—
50,742	4,204,404	83	18,275	195,942	11	22,798	990,360	43

. The figures are compiled in the same way as in previous reports, but owing to the unusual conditions attending the strike, and the number of coal miners who were idle during the year primarily because of the strike. This is men evicted from company houses and replaced in the mines by other men would not be counted by the operator as erected by the union. Many mines reopened after three or four months, operating with smaller working forces than e concerned. In the Pennsylvania bituminous fields the number of men on the pay rolls in January was 152,527 and

STATISTICS OF STRIKES, SUSPENSIONS AND LOCKOUTS AT BITUMINOUS COAL MINES IN THE UNITED STATES, 1899-1933
(Compiled from the Annual Coal Reports of the U. S. Bureau of Mines, formerly U. S. Geological Survey, as Published in Mineral Resources of the United States)

	1931			1932			1933		
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
Alabama	—	—	—	—	—	—	1,200	17,783	15
Arkansas	860	21,153	25	1,964	103,522	53	1,225	8,241	7
Colorado	—	—	—	—	—	—	605	8,363	14
Georgia	—	—	—	—	—	—	—	—	—
Illinois	9,400	397,263	42	32,961	4,397,006	133	1/ 3,187	130,197	41
Indiana	883	14,151	16	3,820	507,051	133	3,151	48,210	15
Iowa	824	24,500	30	389	7,503	19	4,462	186,763	42
Kansas	38	570	15	58	350	6	18	540	30
Kentucky	2,920	59,240	20	721	30,725	43	5,302	69,037	13
Maryland	—	—	—	67	402	6	40	80	2
Michigan	597	26,185	44	—	—	—	562	62,990	112
Missouri	679	34,671	51	301	48,590	161	463	8,040	17
Montana	—	—	—	748	28,100	38	—	—	—
New Mexico	—	—	—	—	—	—	693	27,818	40
North Carolina	—	—	—	—	—	—	—	—	—
North Dakota	—	—	—	—	—	—	—	—	—
Ohio	5,591	138,155	25	15,290	2,130,292	139	3,647	45,942	13
Oklahoma	501	19,812	40	970	46,903	48	219	1,296	6
Pennsylvania	12,783	398,932	31	2,021	113,696	56	86,832	2,896,545	33
South Dakota	—	—	—	—	—	—	—	—	—
Tennessee	1,133	28,767	25	550	35,967	65	375	10,125	27
Texas	—	—	—	—	—	—	—	—	—
Utah	—	—	—	—	—	—	653	9,975	15
Virginia	—	—	—	140	140	1	3,226	56,442	17
Washington	—	—	—	958	42,266	44	894	87,270	98
West Virginia	8,441	393,883	47	1,510	44,307	29	8,723	50,929	6
Wyoming	8	8	1	399	15,648	39	26	26	1
Other small States	—	—	—	—	—	—	—	—	—
Total	44,658	1,557,320	35	62,867	7,552,468	120	125,503	3,726,612	30

1/ Does not include men laid idle at certain mines through labor factional trouble, due to jurisdictional claims of a rival union, which was reported by the operator, as responsible for tonnage losses, ranging from 15 to 88 percent.

	1931			1932			1933		
	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike	Number of men on strike, etc.	Total man-days lost on account of strike, etc.	Average days lost per man on strike
Alabama	—	—	—	—	—	—	1,200	17,783	15
Arkansas	860	21,153	25	1,964	103,522	53	1,225	8,241	7
Colorado	—	—	—	—	—	—	605	8,363	14
Georgia	—	—	—	—	—	—	—	—	—
Illinois	9,400	397,263	42	32,961	4,397,006	133	1/ 3,187	130,197	41
Indiana	883	14,181	16	3,820	507,051	133	3,151	48,210	15
Iowa	824	24,500	30	389	7,503	19	4,462	186,763	42
Kansas	38	570	15	58	350	6	18	540	30
Kentucky	2,920	59,240	20	721	30,725	43	5,302	69,037	13
Maryland	—	—	—	67	402	6	40	80	2
Michigan	597	26,185	44	—	—	—	562	62,990	112
Missouri	679	34,671	51	301	48,590	161	463	8,040	17
Montana	—	—	—	748	28,100	38	—	—	—
New Mexico	—	—	—	—	—	—	693	27,818	40
North Carolina	—	—	—	—	—	—	—	—	—
North Dakota	—	—	—	—	—	—	—	—	—
Ohio	5,591	138,155	25	15,290	2,130,292	139	3,647	45,942	13
Oklahoma	501	19,812	40	970	46,903	48	219	1,296	6
Pennsylvania	12,783	398,932	31	2,021	113,696	56	86,832	2,896,545	33
South Dakota	—	—	—	—	—	—	—	—	—
Tennessee	1,133	28,767	25	550	35,967	65	375	10,125	27
Texas	—	—	—	—	—	—	—	—	—
Utah	—	—	—	—	—	—	653	9,975	15
Virginia	—	—	—	140	140	1	3,226	56,442	17
Washington	—	—	—	958	42,266	44	894	87,270	98
West Virginia	8,441	393,883	47	1,510	44,307	29	8,723	50,929	6
Wyoming	8	8	1	399	15,648	39	26	26	1
Other small States	—	—	—	—	—	—	—	—	—
Total	44,658	1,557,320	35	62,867	7,552,468	120	125,503	3,726,612	30

1/ Does not include men laid idle at certain mines through labor factional trouble, due to jurisdictional claims of a rival union, which was reported by the operator, as responsible for tonnage losses, ranging from 15 to 88 percent.

Prepared by F. G. Tryon and L. Mann
Coal Economics Division,
U. S. Bureau of Mines, Nov. 3. 1935.

SOURCES OF COAL USED FOR RAILROAD FUEL, 1929

A REPORT IN COOPERATION WITH THE BROOKINGS INSTITUTION

The following tables analyze the sources of railroad fuel coal received by Class I railroads in 1929. They are based on reports courteously supplied to the Bureau of Mines by the fuel agents of the individual roads. The Institute of Economics of the Brookings Institution has collaborated in the planning of the investigation and the analysis of the results. The year 1929 was selected for analysis, because comparable figures have been obtained for other classes of consumers, so as to give for the first time a fairly complete picture of the sources of coal used in each part of the country. It is believed that the results will be useful both to railroad fuel agents and to sales managers and distributors of coal.

The striking changes in the sources of railroad fuel since the war are summarized in the diagram on page 1 of the accompanying Monthly Distribution Report.

FUEL COAL DELIVERED TO CLASS I RAILROADS, BY MINING DISTRICTS, 1917, 1928, AND 1929, IN NET TONS

Mining district	1917	1928	1929	Per cent 1929 was of 1917
Central Pennsylvania	18,163,708	9,508,886	9,462,326	52.1
Somerset-Meyersdale	2,575,647	876,148	901,978	35.0
Cumberland-Piedmont	524,462	413,023	646,614	123.3
Western Pennsylvania a	14,482,014	16,362,752	17,707,478	122.3
Nor. and East. Ohio; Panhandle	8,478,019	6,960,919	8,913,745	105.1
Southern Ohio	4,432,057	895,294	1,675,608	37.8
Northern West Virginia	5,839,967	10,680,372	11,150,408	190.9
Kanawha, Logan, Kenova-Thacker	6,332,007	11,578,975	10,622,799	168.0
New River	b 2,224,395	126,287	102,807	31.9
Pocahontas		550,042	607,790	
Virginia	2,909,893	2,919,513	3,085,804	106.0
North Carolina	- - -	47,320	42,187	
Northeastern Kentucky c	470,059	501,207	642,307	136.6
Hazard	250,000	752,207	797,810	319.1
Southeastern Kentucky	1,071,971	2,086,270	2,010,373	187.5
Tennessee	2,377,884	2,538,581	2,335,956	98.2
Alabama	5,311,857	4,972,705	5,136,611	96.7
Michigan	345,415	398,316	482,212	139.6
Illinois	33,696,513	18,761,214	19,910,681	59.1
Indiana	7,038,408	5,487,397	6,111,030	86.8
Western Kentucky	2,798,025	4,196,625	4,203,264	150.2
Iowa	4,369,482	1,401,598	1,563,547	35.8
Kansas and Missouri	5,102,966	1,706,840	1,858,327	36.4
Arkansas	663,089	534,267	431,750	65.1
Oklahoma	2,233,022	1,408,155	1,487,285	66.6
Texas	910,311	109,589	106,457	11.7
North Dakota	26,355	30,840	28,911	109.7
Montana	2,109,728	2,147,352	2,183,590	103.5
Wyoming	5,259,437	4,232,365	4,407,795	83.8
Colorado	2,967,819	2,290,481	2,189,776	73.8
New Mexico	1,979,673	1,449,644	1,366,296	69.0
Utah	912,500	726,139	730,481	80.1
Washington	1,963,818	859,647	881,491	44.9
Oregon	3,101	1,140	5,743	273.3
Canada	585,139	254,820	267,863	45.8
Confiscated and unknown	1,685,746	263,109	101,838	6.0
Total bituminous	150,083,527	118,070,039	124,159,938	83.7
Anthracite	5,293,301	3,589,530	3,162,727	59.7
Grand total	155,376,828	121,659,569	127,322,665	81.9

(a) Includes Pittsburgh, Westmoreland, Connellsville, Freeport, and Northwestern Pennsylvania. (b) There is a possibility that about 400,000 tons of coal in the New River district in 1917 was high volatile coal from Kanawha district. If so, the percentage for 1929 as compared with 1917 for New River and Pocahontas combined would amount to about 39 per cent instead of 31.9 per cent as shown in the table. (c) Includes tonnages derived from the McRoberts district on the Louisville and Nashville Railroad which amounted to 313,046 tons in 1917; 246,136 in 1928; and 264,903 in 1929.

These figures include coal used by Class I railroads at shops, round-houses, and stations as well as for locomotive fuel. They do not include Class II railroads, whose consumption is about 1,177,000 tons, or switching and terminal companies, whose consumption is about 3,233,000 tons. The figures represent receipts, which is not exactly the same as consumption.

The following table shows that there are wide variations in the percentages of total railroad fuel coal moving from the different mining districts on which freight was paid and on which no freight was paid. Where the percentage of the tonnage on which no freight was paid was high, the indications are that the mining district has an advantage in marketing coal to the railroads. Ninety per cent or more of the railroad tonnage from the following mining districts paid no freight in 1929: West Virginia Panhandle, Michigan, Iowa, Kansas-Missouri, Arkansas, Oklahoma, Texas, North Dakota, Montana, Northern Wyoming, New Mexico, Washington, North Carolina, and Oregon.

RAILROAD FUEL COAL ON WHICH FREIGHT WAS PAID AND ON WHICH NO FREIGHT WAS PAID, BY MINING DISTRICTS, 1929, IN NET TONS

Mining district	Freight paid		No freight paid		Total
	Net tons	Per cent	Net tons	Per cent	Net tons
Central Pennsylvania	3,822,090	40.4	5,640,236	59.6	9,462,326
Somerset-Meyersdale	516,928	57.3	385,050	42.7	901,978
Cumberland-Piedmont	237,593	36.7	409,021	63.3	646,614
Connellsville and Westmoreland	803,731	14.1	4,880,990	85.9	5,684,721
Pittsburgh	3,344,289	48.7	3,516,211	51.3	6,860,500
Northern Pennsylvania	1,316,166	25.5	3,846,091	74.5	5,162,257
Northern and Eastern Ohio	3,197,697	49.5	3,261,367	50.5	6,459,064
Southern Ohio	469,043	28.0	1,206,565	72.0	1,675,608
Panhandle	185,220	7.5	2,269,461	92.5	2,454,681
Northern West Virginia	7,428,787	66.6	3,721,621	33.4	11,150,408
Kanawha	1,323,867	40.6	1,940,655	59.4	3,264,522
Logan	3,006,912	70.7	1,244,383	29.3	4,251,295
Kenova-Thacker	701,429	22.6	2,405,553	77.4	3,106,982
New River	47,905	46.6	54,902	53.4	102,807
Pocahontas	85,980	14.1	521,810	85.9	607,790
Virginia	1,192,639	38.6	1,893,165	61.4	3,085,804
North Carolina	- - -	- -	42,187	100.0	42,187
Northeastern Kentucky	218,029	33.9	424,278	66.1	642,307
Hazard	298,925	37.5	498,885	62.5	797,810
Southeastern Kentucky	485,935	24.2	1,524,438	75.8	2,010,373
Tennessee	471,276	20.2	1,864,680	79.8	2,335,956
Alabama	1,866,567	24.7	3,869,044	75.3	5,135,611
Michigan	198	0.1	482,014	99.9	482,212
Illinois	3,940,939	19.8	15,969,742	80.2	19,910,681
Indiana	991,077	16.2	5,119,953	83.8	6,111,030
Western Kentucky	987,878	23.5	3,215,386	76.5	4,203,264
Iowa	46	- -	1,563,501	100.0	1,563,547
Kansas and Missouri	90,063	4.8	1,768,264	95.2	1,858,327
Arkansas	6,230	1.4	425,520	98.6	431,750
Oklahoma	126,274	8.5	1,361,011	91.5	1,487,285
Texas	7,636	7.2	98,821	92.8	106,457
North Dakota	1,481	5.1	27,430	94.9	28,911
Montana	- - -	- -	2,183,590	100.0	2,183,590
Northern Wyoming	- - -	- -	434,008	100.0	434,008
Southern Wyoming	409,017	10.3	3,564,770	89.7	3,973,787
Colorado	871,898	39.8	1,317,878	60.2	2,189,776
New Mexico	142	- -	1,366,154	100.0	1,366,296
Utah	359,352	49.2	371,129	50.8	730,481
Washington	18,041	2.0	863,450	98.0	881,491
Oregon	- - -	- -	5,743	100.0	5,743
Canada	61,983	23.1	205,880	76.9	267,863
Confiscated and Unknown	93,176	91.5	8,662	8.5	101,838
Total Bituminous	38,386,439	30.9	85,773,499	69.1	124,159,938
Anthracite	254,643	8.1	2,908,084	91.9	3,162,727
Grand total	38,641,082	30.3	88,681,583	69.7	127,322,665

941.

M.C.D. No. 5 FUEL COAL DELIVERED TO CLASS I RAILROADS, BY PRODUCING DISTRICTS AND BY CONSUMING REGIONS, IN 1929, IN NET TONS 10866

Mining district	New England region	Great Lakes region	Central Eastern region	Poca-hontas region	Southern region	North-western region	Central Western region	South-western region	Total
Central Pennsylvania	880,379	6,567,047	2,014,730	- - -	- - -	170	- - -	- - -	9,462,326
Somerset-Meyersdale	- - -	155	901,823	- - -	- - -	- - -	- - -	- - -	901,978
Cumberland-Piedmont	- - -	5,715	640,899	- - -	- - -	- - -	- - -	- - -	646,614
Connellsville and Westmoreland	380.265	285,267	5,019,189	- - -	- - -	- - -	- - -	- - -	5,684,721
Pittsburgh	- - -	2,573,845	2,958,297	- - -	- - -	1,328,358	- - -	- - -	6,860,500
Northern Pennsylvania	- - -	1,326,002	3,836,255	- - -	- - -	- - -	- - -	- - -	5,162,257
Northern and Eastern Ohio	- - -	2,097,792	2,847,966	- - -	- - -	1,513,306	- - -	- - -	6,459,064
Southern Ohio	- - -	1,049,876	612,635	- - -	- - -	13,095	- - -	- - -	1,675,608
Panhandle	- - -	49,593	2,320,088	- - -	- - -	85,000	- - -	- - -	2,454,681
Northern West Virginia	1,303,704	3,070,192	5,303,809	- - -	- - -	1,472,703	- - -	- - -	11,150,408
Kanawha	- - -	1,107,536	43,965	1,788,888	323,982	- - -	- - -	151	3,264,522
Logan	1,380,935	1,153,267	234,073	1,244,383	194,232	44,405	- - -	- - -	4,251,295
Kenova-Thacker	154	88,508	194,296	2,405,553	418,276	195	- - -	- - -	3,106,982
New River	40,189	2,249	747	57,105	- - -	397	2,120	- - -	102,807
Pocahontas	59,697	4,570	10,113	522,535	- - -	10,875	- - -	- - -	607,790
Virginia	- - -	- - -	47	201,018	2,884,428	311	- - -	- - -	3,085,804
North Carolina	- - -	- - -	- - -	- - -	42,187	- - -	- - -	- - -	42,187
Northeastern Kentucky	- - -	8,549	156,262	187,617	236,661	53,218	- - -	- - -	642,307
Hazard	- - -	55,349	243,576	- - -	498,885	- - -	- - -	- - -	797,810
Southeastern Kentucky	- - -	25,522	202,712	- - -	1,782,139	- - -	- - -	- - -	2,010,373
Tennessee	- - -	- - -	- - -	- - -	2,334,241	- - -	- - -	1,715	2,335,956
Alabama	- - -	- - -	- - -	- - -	4,517,884	- - -	- - -	617,727	5,135,611
Michigan	- - -	482,212	- - -	- - -	- - -	- - -	- - -	- - -	482,212
Illinois	- - -	2,595,492	1,820,332	- - -	3,276,008	4,576,962	5,515,984	2,025,903	19,910,681
Indiana	- - -	363,573	2,316,289	- - -	443,323	2,969,052	18,783	- - -	6,111,030
Western Kentucky	- - -	243,695	173,902	- - -	3,454,709	59,713	88,962	202,283	4,203,264
Iowa	- - -	39,806	- - -	- - -	- - -	515,015	1,008,726	- - -	1,563,547
Kansas and Missouri	- - -	35,267	- - -	- - -	- - -	11,879	846,796	1,364,385	1,858,327
Arkansas	- - -	- - -	- - -	- - -	- - -	95	- - -	431,655	431,750
Oklahoma	- - -	- - -	- - -	- - -	- - -	- - -	816,197	671,088	1,487,285
Texas	- - -	- - -	- - -	- - -	- - -	- - -	45,439	61,018	106,457
North Dakota	- - -	- - -	- - -	- - -	- - -	28,911	- - -	- - -	28,911
Montana	- - -	- - -	- - -	- - -	- - -	2,183,590	- - -	- - -	2,183,590
Northern Wyoming	- - -	- - -	- - -	- - -	- - -	25,213	408,795	- - -	434,008
Southern Wyoming	- - -	- - -	- - -	- - -	- - -	184,419	3,789,368	- - -	3,973,787
Colorado	- - -	- - -	- - -	- - -	- - -	410	1,972,008	217,358	2,189,776
New Mexico	- - -	- - -	- - -	- - -	- - -	- - -	1,366,238	58	1,356,296
Utah	- - -	- - -	- - -	- - -	- - -	88	730,393	- - -	730,481

- 7 -

Plaintiff's Ex. 6.

M.C.D.
No. 8. FUEL COAL DELIVERED TO CLASS I RAILROADS, BY PRODUCING DISTRICTS AND BY CONSUMING REGIONS, IN 1929, IN NET TONS (Cont'd)

Mining district	New England region	Great Lakes region	Central eastern region	Pocahontas region	Southern region	Northwestern region	Central Western region	Southwestern region	Total
Washington	- - -	- - -	- - -	- - -	- - -	881,491	- - -	- - -	881,491
Oregon	- - -	- - -	- - -	- - -	- - -	- - -	5,743	- - -	5,743
Canada	43,000	- - -	- - -	- - -	- - -	224,863	- - -	- - -	267,863
Confiscated and Unknown	- - -	11,250	18,857	6,858	223	52,846	11,774	30	101,838
Total bituminous	4,088,323	23,242,329	31,870,863	6,413,957	20,407,178	16,236,581	16,307,336	5,593,371	124,159,938
Anthracite	10,479	1,851,157	1,296,931	133	1,728	2,262	- - -	37	3,162,727
Grand total	4,098,802	25,093,486	33,167,794	6,414,090	20,408,906	16,238,843	16,307,336	5,593,408	127,322,665

Comparability of reports from fuel agents and from traffic managers:- Because of differences in coal trade terminology the fuel agents did not always use the same district names in reporting their purchases but every effort has been made to keep the district classification as constant as the records of the carriers permit. The figures are as reported by the fuel agents of the consuming railroads and therefore differ slightly from the shipments of railroad fuel out of each mining district, as reported by the traffic managers of the originating carriers. See Supplement to Monthly Coal Distribution Report No. I, pages 1-2. In a few cases the differences are rather large due to the fact that the purchasing agents defined the boundaries of the district differently from the traffic managers. It should be noted, also, that the figures shown here represent all coal received by railroads including all-rail, tide-water, and lake cargo while the traffic managers reported only the all-rail railroad fuel.

Origin by districts, 1917, 1928 and 1929:- The first table shows the quantity originating in each mining district, and for purposes of comparison the corresponding figures for 1917 are given. In 1917 the Class I roads purchased 150,083,527 tons of bituminous coal. The 1929 purchases were thus only 82.7 per cent of those in 1917. The decrease in comparison with 1917, however, was not uniformly distributed among the mining districts. In general, the high-volatile fields of West Virginia and Kentucky show a large increase in sales to the railroads, while the low-volatile fields and many of the northern and western high-volatile fields show a very sharp decline.

Railroad fuel coal delivered to Class I railroads, by all-rail, by tidewater, and by Great Lakes:- In 1929, 120,923,932 tons or 94.9 per cent of the coal delivered to Class I railroads, moved all-rail, 1.4 per cent by tidewater, and 3.7 per cent by way of the Great Lakes. The railroads of the New England Region received 41.8 per cent of their fuel coal by tidewater while the railroads of the Northwestern Region received 27.8 per cent of their tonnage by way of the Great Lakes.

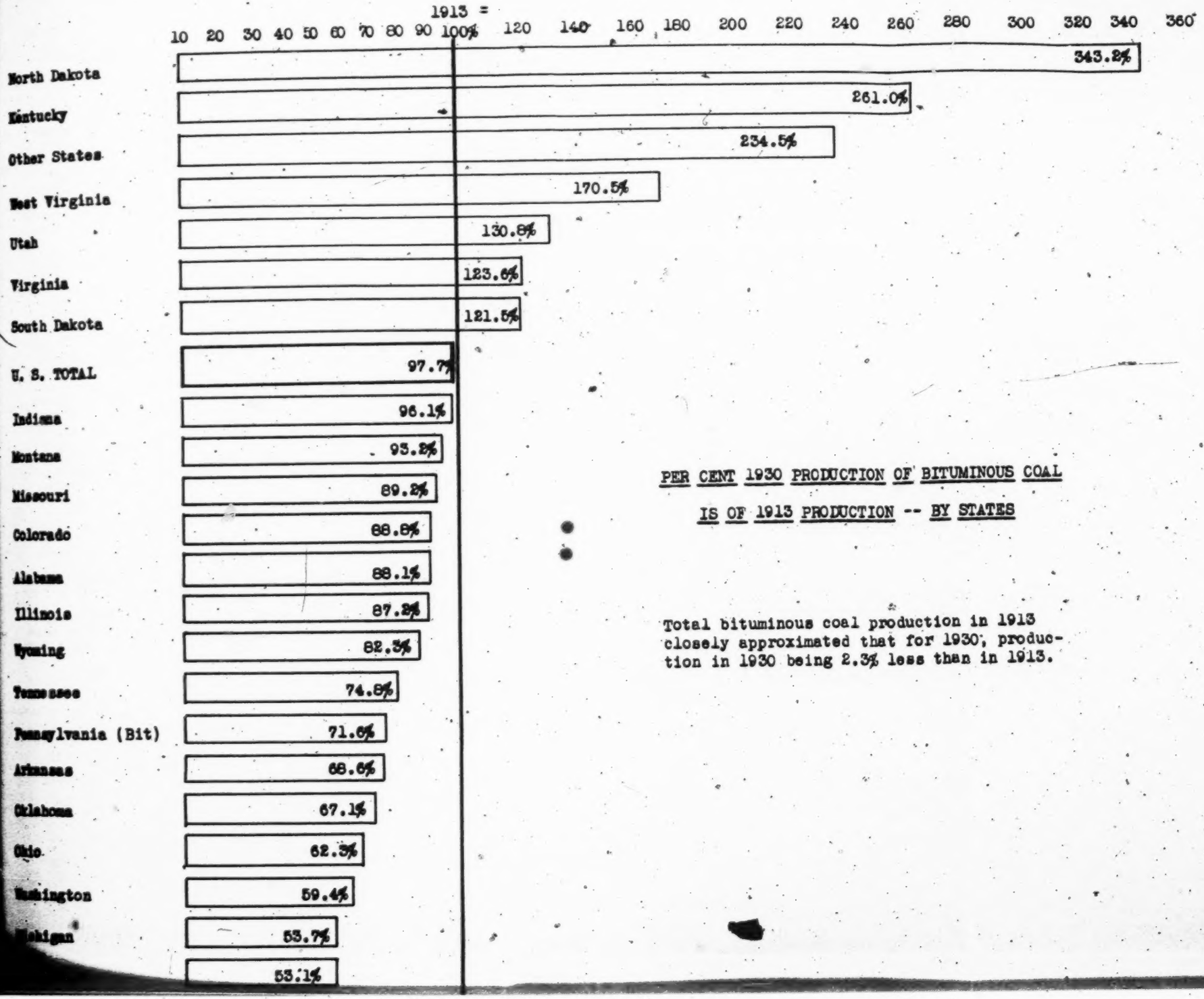
Source of coal by railroad regions, 1929:- The last table shows the source of coal received by the Class I railroads in the eight railroad regions established by the Interstate Commerce Commission. The railroads in the various regions, generally speaking, drew fuel coal from many mining districts, yet the greater percentage of their tonnage was obtained from a few mining districts. Usually, the districts from which the bulk of the tonnage was obtained were in close proximity to the railroad region, there being exceptions, however. The railroads in the New England region drew their coal chiefly from Central Pennsylvania, Northern West Virginia, and Logan. The railroads of the Northwest obtained fuel coal from mining districts in the Northwest, the Middle West, and from the Appalachian area, by way of the Great Lakes.

By W. H. Young and F. G. Tryon,
Statistics Section, Coal Division.
J. P. WHITE, HEAD, COAL DIVISION.

March 21, 1932.

Plaintiff's Ex. 67

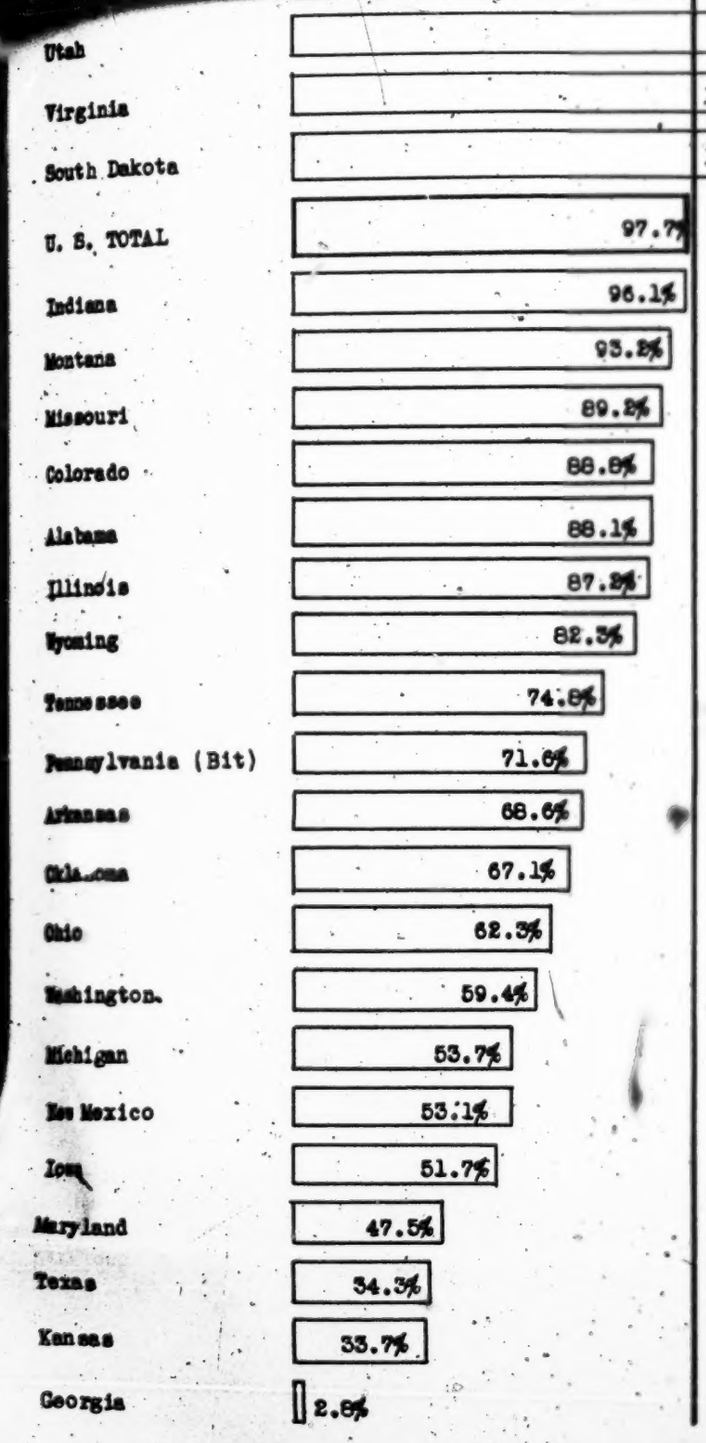
Plaintiff's Ex. 68



PER CENT 1930 PRODUCTION OF BITUMINOUS COAL IS OF 1913 PRODUCTION -- BY STATES

Total bituminous coal production in 1913 closely approximated that for 1930, production in 1930 being 2.3% less than in 1913.

PER CENT 1930 PRODUCTION OF BITUMINOUS COAL IS OF 1913 PRODUCTION -- BY STATES



Total bituminous coal production in 1913 closely approximated that for 1930, production in 1930 being 2.3% less than in 1913.

SOURCE: Calculated from data given in Bureau of Mines reports

[fol. 983] PLAINTIFF'S EXHIBIT 68-A

Trend of Bituminous Coal Production, by States, 1913 and 1930
(Net tons)

	1913	1930	% of increase or decrease	% 1930 is of 1913
Alabama	17,678,522	15,570,058	− 11.9%	88.1%
Arkansas	2,234,107	1,533,434	− 31.4	68.6
Colorado	9,232,510	8,196,910	− 11.2	88.8
Georgia	255,626	7,092	− 97.2	2.8
Illinois	61,618,744	53,731,230	− 12.8	87.2
Indiana	17,165,671	16,489,962	− 3.9	96.1
Iowa	7,525,936	3,892,571	− 48.3	51.7
Kansas	7,202,210	2,429,929	− 66.3	33.7
Kentucky	19,616,600	51,208,995	+161.0	261.0
Maryland	4,779,839	2,270,593	− 52.5	47.5
Michigan	1,231,786	661,113	− 46.3	53.7
Missouri	4,318,125	3,853,150	− 10.8	89.2
Montana	3,240,973	3,022,004	− 6.8	93.2
New Mexico	3,708,806	1,969,433	− 46.9	53.1
North Dakota	495,320	1,700,157	+243.2	343.2
Ohio	36,200,527	22,551,978	− 37.7	62.3
Oklahoma	4,165,770	2,793,954	− 32.9	67.1
Pennsylvania	173,781,217	124,462,787	− 28.4	71.6
South Dakota	10,540	12,810	+ 21.5	121.5
Tennessee	6,860,184	5,130,428	− 25.2	74.8
Texas	2,429,144	833,872	− 65.7	34.3
Utah	3,254,828	4,257,541	+ 30.8	130.8
Virginia	8,828,068	10,907,377	+ 23.6	123.6
Washington	3,877,891	2,301,928	− 40.6	59.4
West Virginia	71,254,136	121,472,638	+ 70.5	170.5
Wyoming	7,393,066	6,088,133	− 17.7	82.3
Other States	75,151	176,222	+134.5	234.5
Total U. S. Production	478,435,297	467,526,299	− 2.3	97.7

Source: Bureau of Mines report.

Note: These years were selected for camparison because total U. S. production was approximately the same in both years.

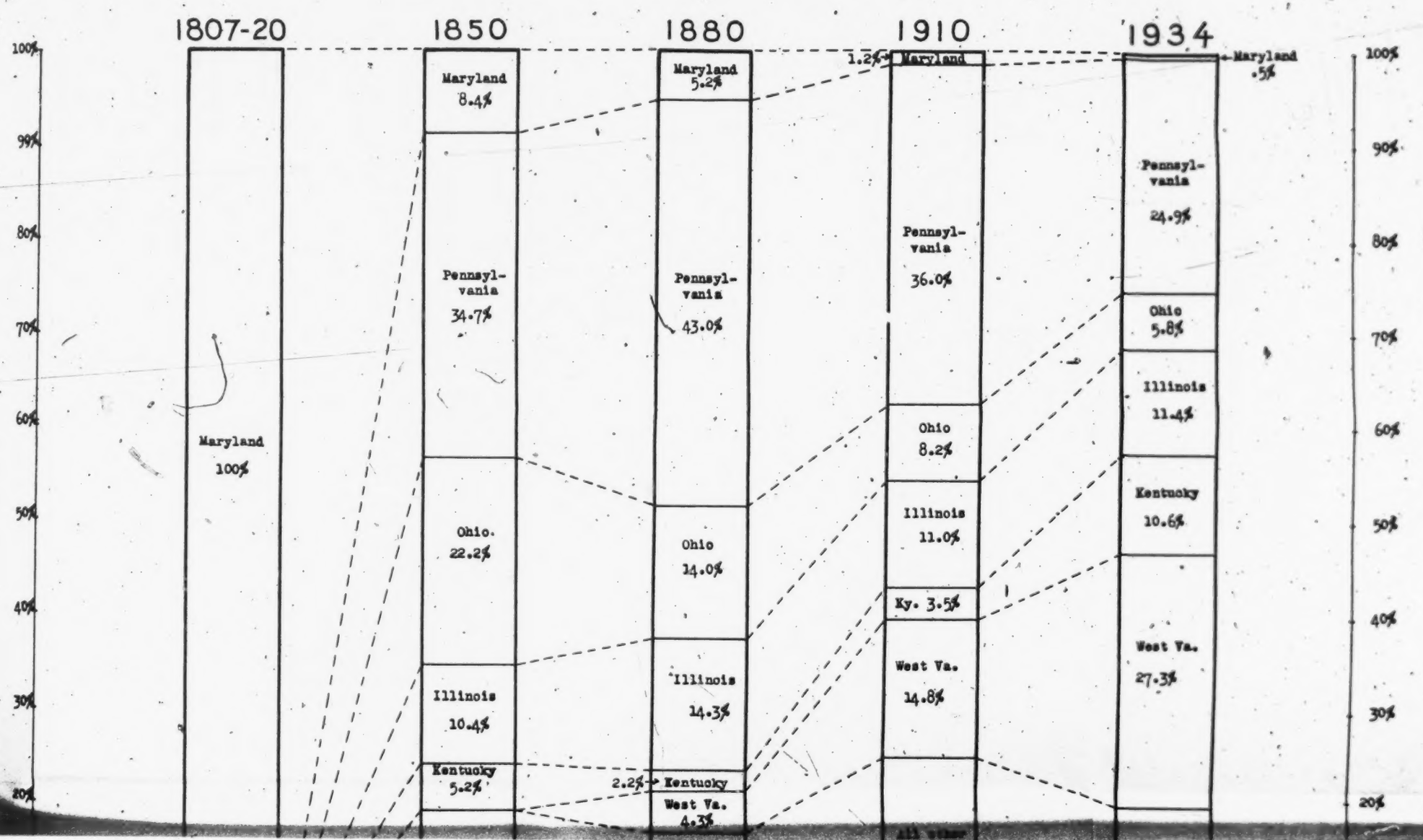
Source: Page 626, Table 10 of "Coal in 1930" except "% 1930 is of 1913" which was calculated by adding, or subtracting % of increase or decrease from 100%.

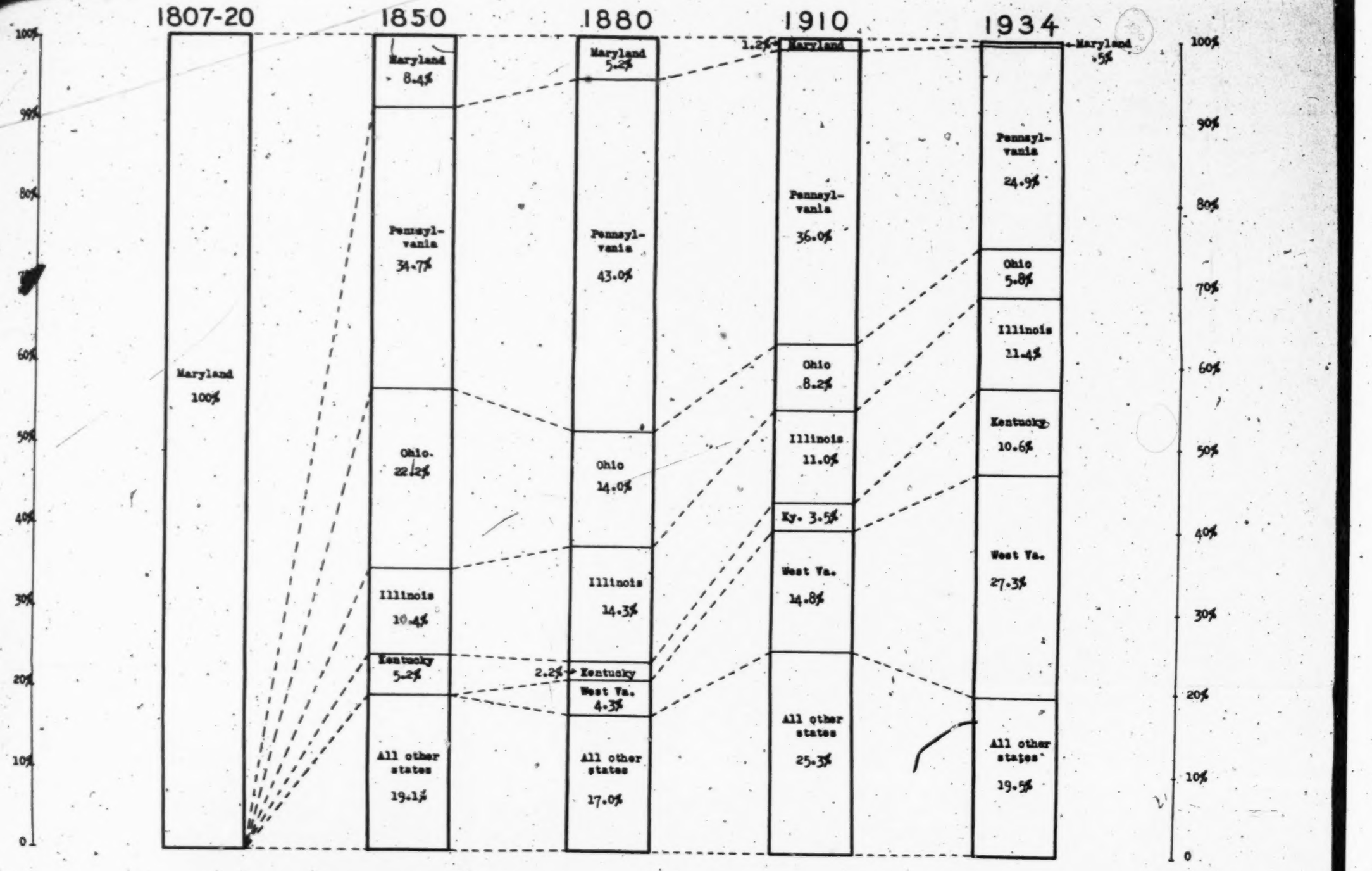
(Here follow 4 charts, side folios 984, 985, 986 and 98

Plaintiff's Ex. 69

PERCENTAGE OF TOTAL BITUMINOUS PRODUCTION OF UNITED STATES IN EACH SPECIFIED STATE: 1807-1820, 1850, 1880, 1910 and 1934

NOTE: 1807-1820 is the earliest period for which production data are available. Data for 30-year intervals since then and for 1934 (preliminary) are also shown below





Source: Compiled from Reports of Bureau of Mines

Plaintiff's Ex. 69-A

Bituminous Coal Production by States in Specified Years

NOTE: The statistical record of the industry begins in 1807, and 1807-1820 is the earliest period for which production data are available. Data for 30-year intervals since then and for 1934 (preliminary) are also shown below.

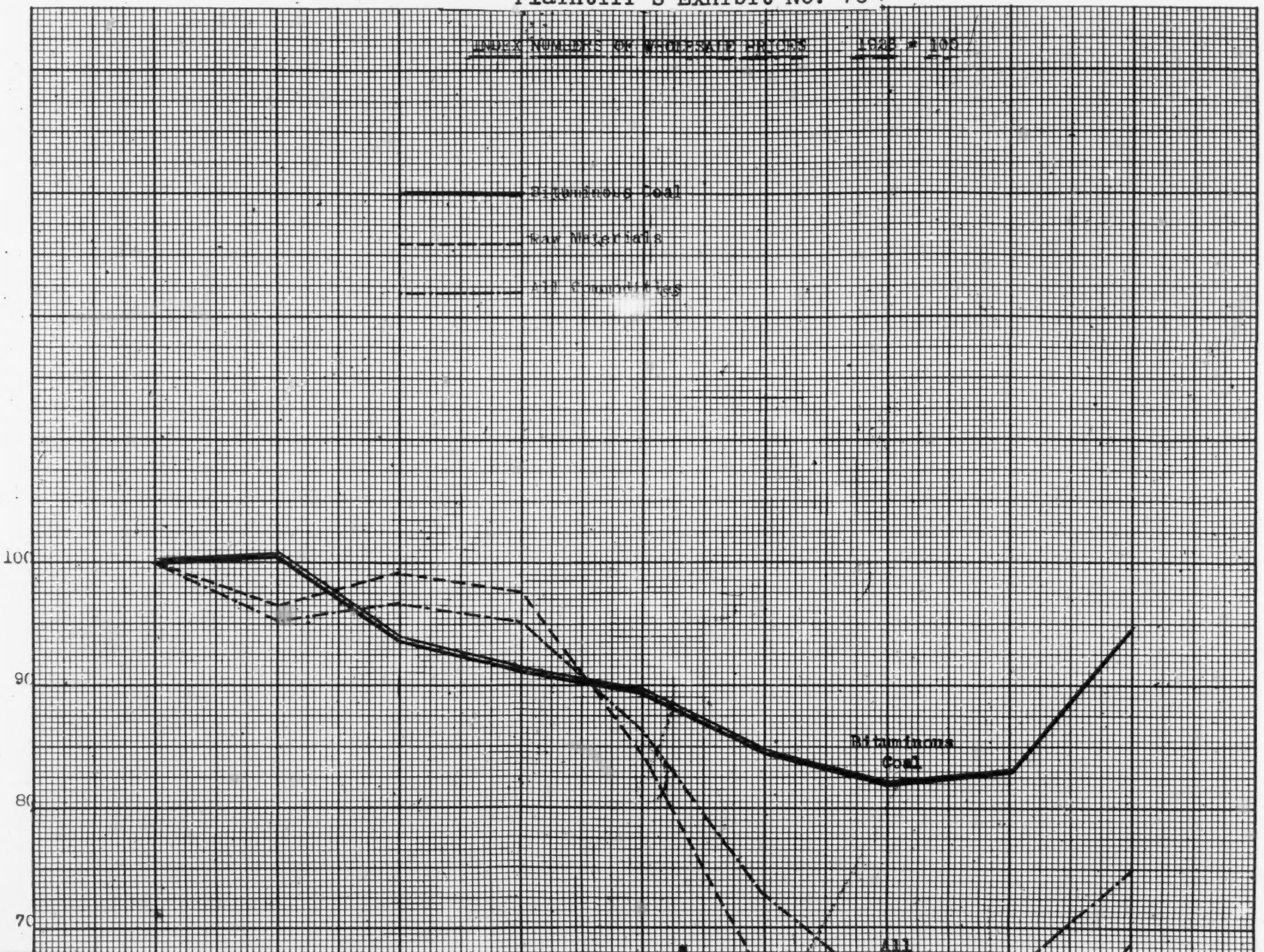
	1807--1820		1850		1880		1910		1934 (Preliminary)	
	Net Tons	% of U. S. Total	Net Tons	% of U. S. Total	Net Tons	% of U. S. Total	Net Tons	% of U. S. Total	Net Tons	% of U. S. Total
Alabama			2,500	.1	323,972	.8	16,111,462	3.9	9,596,000	2.7
Alaska									112,000	.3
Arkansas					14,778		1,905,958	.5	Included with Oklahoma	
California, Idaho and Oregon					280,155	.7	78,697	•	Included with "Other States"	
Colorado					462,747	1.1	11,973,736	2.9	5,168,000	1.4
Georgia					154,644	.3	177,245	•	47,000	.1
Indiana			60,000	2.1	1,454,327	3.4	18,389,815	4.4	14,820,000	4.1
Iowa			15,000	.5	1,461,116	3.4	7,988,120	1.9	3,345,000	.9
Illinois			300,000	10.4	6,115,377	14.3	45,900,246	11.0	40,905,000	11.4
Kansas					771,442	1.8	4,921,451	1.1	Included with Missouri	
Kentucky			150,000	5.2	946,288	2.2	14,623,319	3.5	38,068,000	10.6
Maryland	3,000	100.0	242,517	8.4	2,228,917	5.2	5,217,125	1.2	1,660,000	.5
Michigan					100,800	.2	1,534,967	.4	631,000	.2
Missouri			100,000	3.5	844,304	2.	2,982,433	.7	5,800,000	1.6
Montana					224	•	2,920,970	.7	2,600,000	.7
New Mexico							3,508,321	.8	1,250,000	.3
North Carolina					350	•			Included with Georgia	
North Dakota							399,041	.1	1,770,000	.5
Ohio			640,000	22.2	6,008,595	14.0	34,209,668	8.2	20,842,000	5.8
Oklahoma					120,947	.3	2,646,226	.6	2,264,000	.6
Pennsylvania (bituminous)			1,000,000	34.7	18,425,163	43.0	150,521,526	36.0	89,223,000	24.9
South Dakota									60,000	.2
Tennessee			60,000	2.1	495,131	1.1	7,121,380	1.7	4,056,000	1.1
Texas							1,892,176	.5	716,000	.2
[illegible]					14,748	•	2,517,809	.6	2,418,000	.6
[illegible]			[illegible]	[illegible]	[illegible]	.1	[illegible]	[illegible]	[illegible]	[illegible]

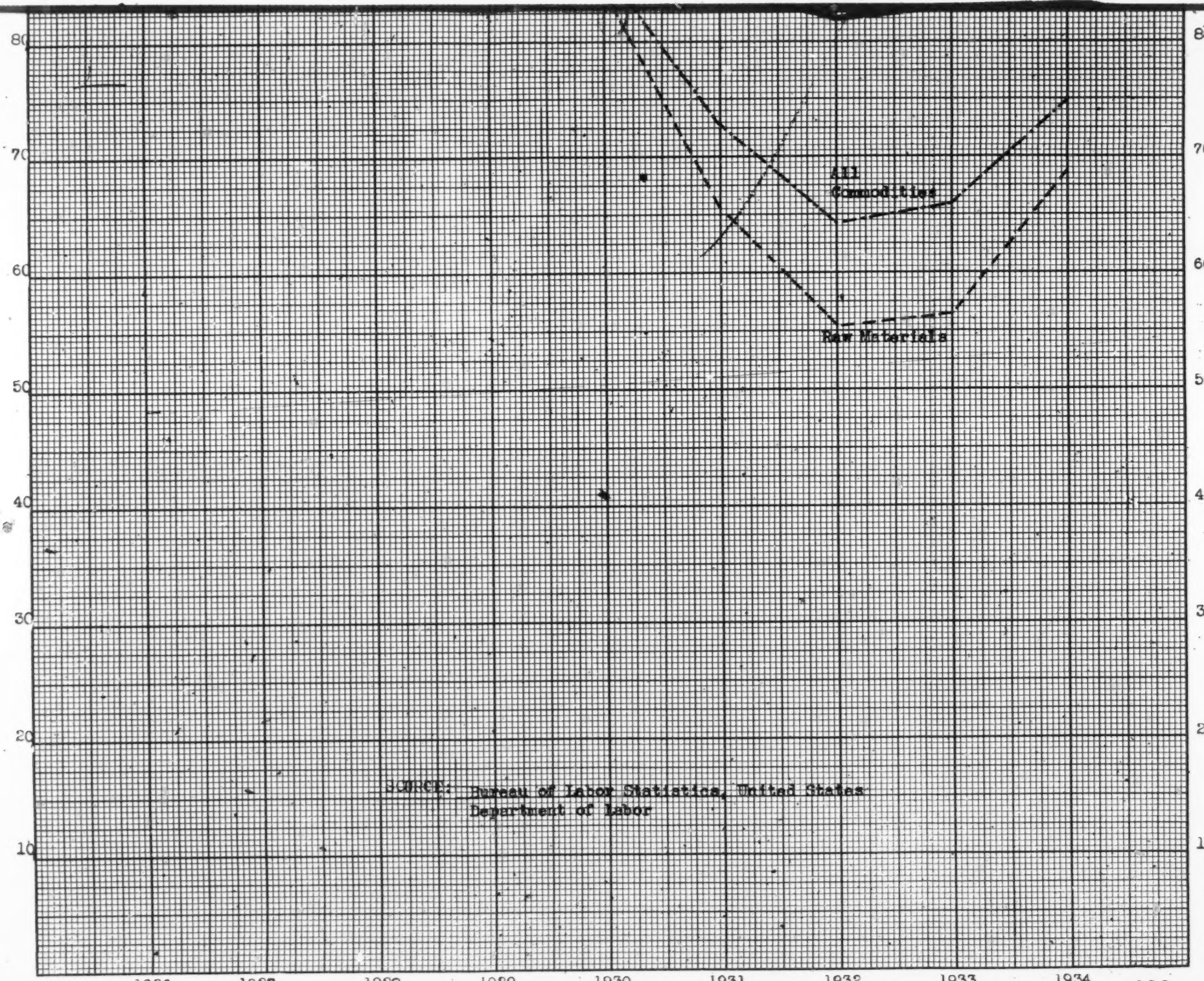
Alaska									112,000	.3
Arkansas					14,778		1,905,958	.5	Included with Oklahoma	
California, Idaho and Oregon					280,155	.7	78,697	*	Included with "Other States"	
Colorado					462,747	1.1	11,973,736	2.9	5,168,000	1.4
Georgia					154,644	.3	177,245	*	47,000	.1
Indiana			60,000	2.1	1,454,327	3.4	18,389,815	4.4	14,820,000	4.1
Iowa			15,000	.5	1,461,116	3.4	7,928,120	1.9	3,345,000	.9
Illinois			300,000	10.4	6,115,377	14.3	45,900,246	11.0	40,905,000	11.4
Kansas					771,442	1.8	4,921,451	1.1	Included with Missouri	
Kentucky			150,000	5.2	946,288	2.2	14,623,319	3.5	38,068,000	10.6
Maryland	3,000	100.0	242,517	8.4	2,228,917	5.2	5,217,125	1.2	1,660,000	.5
Michigan					100,800	.2	1,534,967	.4	631,000	.2
Missouri			100,000	3.5	844,304	2.	2,982,433	.7	5,800,000	1.6
Montana					224	*	2,920,970	.7	2,600,000	.7
New Mexico							3,508,321	.8	1,250,000	.3
North Carolina					350	*			Included with Georgia	
North Dakota							399,041	.1	1,770,000	.5
Ohio			640,000	22.2	6,008,595	14.0	34,209,668	8.2	20,842,000	5.8
Oklahoma					120,947	.3	2,646,226	.6	2,264,000	.6
Pennsylvania (bituminous)			1,000,000	34.7	18,425,163	43.0	150,521,526	36.0	89,223,000	24.9
South Dakota									60,000	.2
Tennessee			60,000	2.1	495,131	1.1	7,121,380	1.7	4,056,000	1.1
Texas							1,892,176	.5	716,000	.2
Utah					14,748	*	2,517,809	.6	2,418,000	.6
Virginia			310,000	10.8	43,079	.1	6,507,997	1.5	9,100,000	2.5
Washington					145,015	.3	3,911,899	.9	1,387,000	.4
West Virginia					1,829,844	4.3	61,671,019	14.8	98,190,000	27.3
Wyoming					589,595	1.4	7,533,088	1.8	4,349,000	1.2
Other States					200	.1*	5,448	.1*	18,000	.1*
Total bituminous	3,000	100.0%	2,880,017	100.0%	42,831,758	100.0%	417,111,142	100.0%	358,395,000	100.0%

*Percentages of less than .1% included in percentages opposite "Other States".

Source: Compiled from reports of Bureau of Mines:

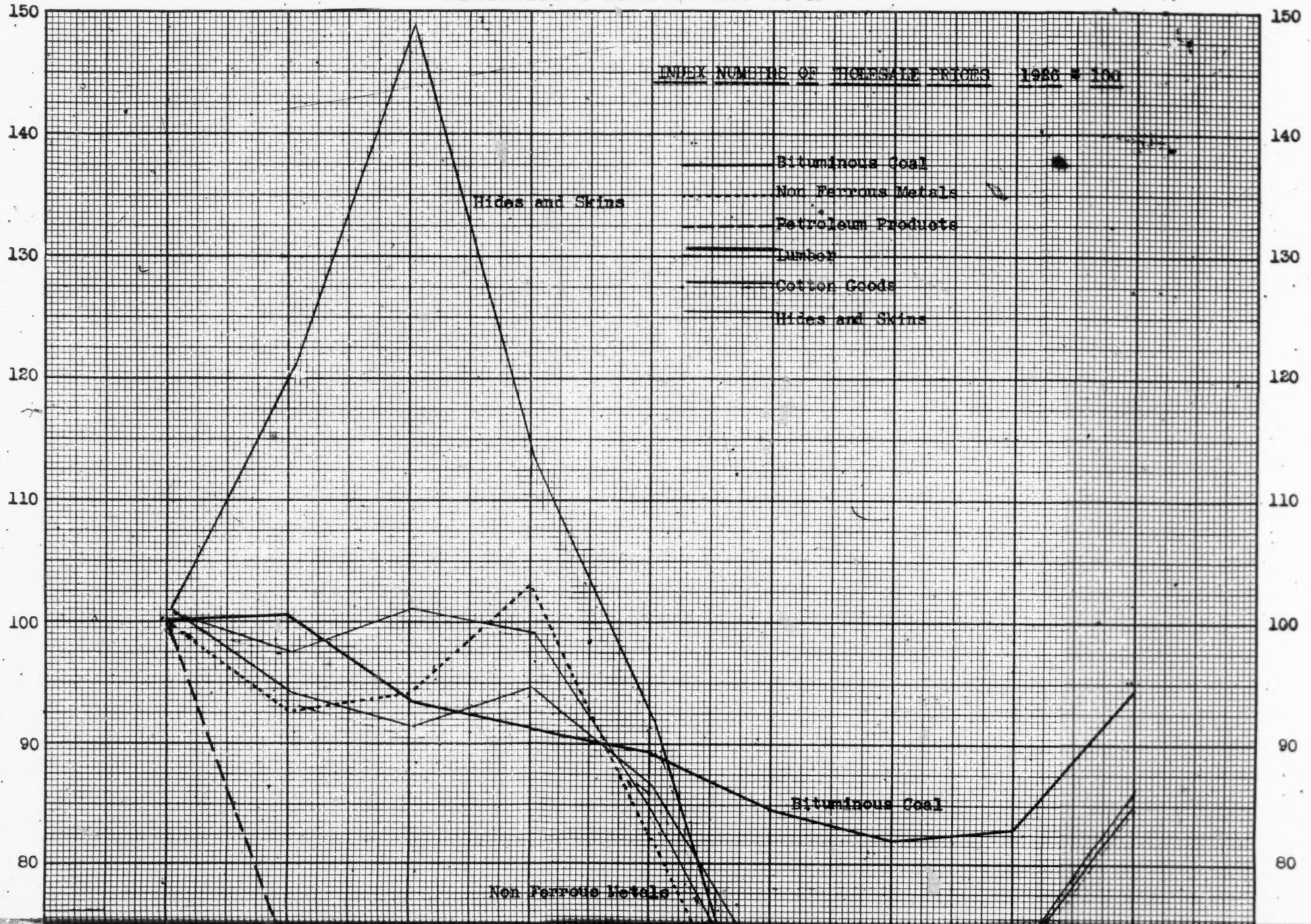
Plaintiff's Exhibit No. 70

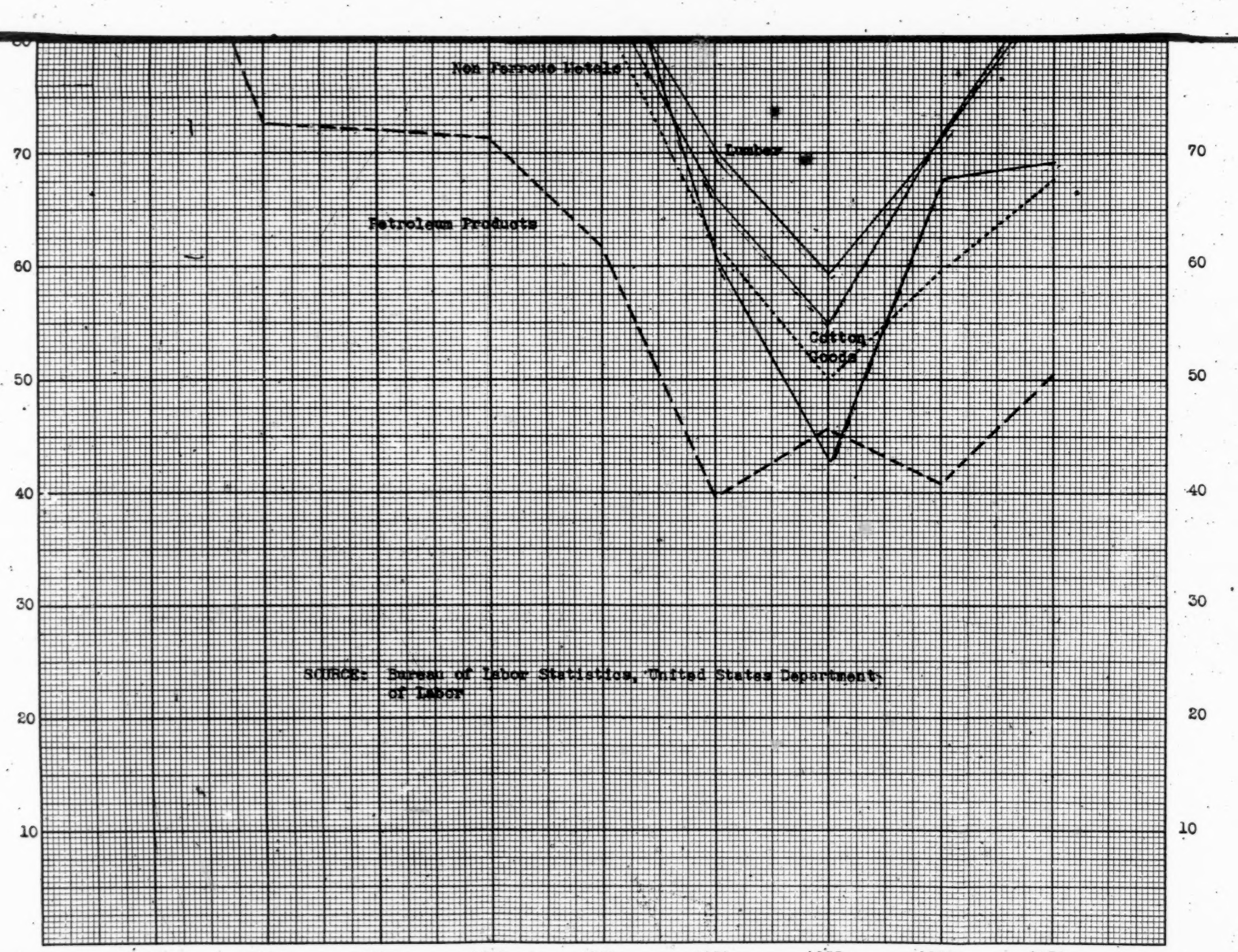




SOURCE: Bureau of Labor Statistics, United States Department of Labor

Plaintiff's Exhibit No. 70-A





SOURCE: Bureau of Labor Statistics, United States Department of Labor

[fol. 988]

PLAINTIFF'S EXHIBIT 70-B

Index Numbers of Wholesale Prices of Specified Commodities or Commodity Groups

1926 = 100

	Bituminous Coal	Nonferrous Metals	Petroleum Products	Lumber	Cotton Goods	Hides and Skins	Raw Materials	All Commodities
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	100.3	92.8	72.7	93.1	97.1	120.3	96.5	95.4
1928	93.6	94.0	72.0	90.5	100.4	148.6	99.1	96.7
1929	91.3	106.1	71.3	93.8	98.8	112.7	97.5	95.3
1930	89.4	82.4	61.5	85.8	84.7	91.0	84.3	86.4
1931	84.6	61.9	39.5	69.5	66.1	60.2	65.6	73.0
1932	82.0	49.8	45.4	58.5	54.0	42.1	55.1	64.8
1933	82.8	59.6	41.0	70.7	71.2	67.1	56.5	65.9
1934	94.5	67.7	50.5	84.5	86.5	68.6	68.6	74.9

Source: Bureau of Labor Statistics, United States Department of Labor.

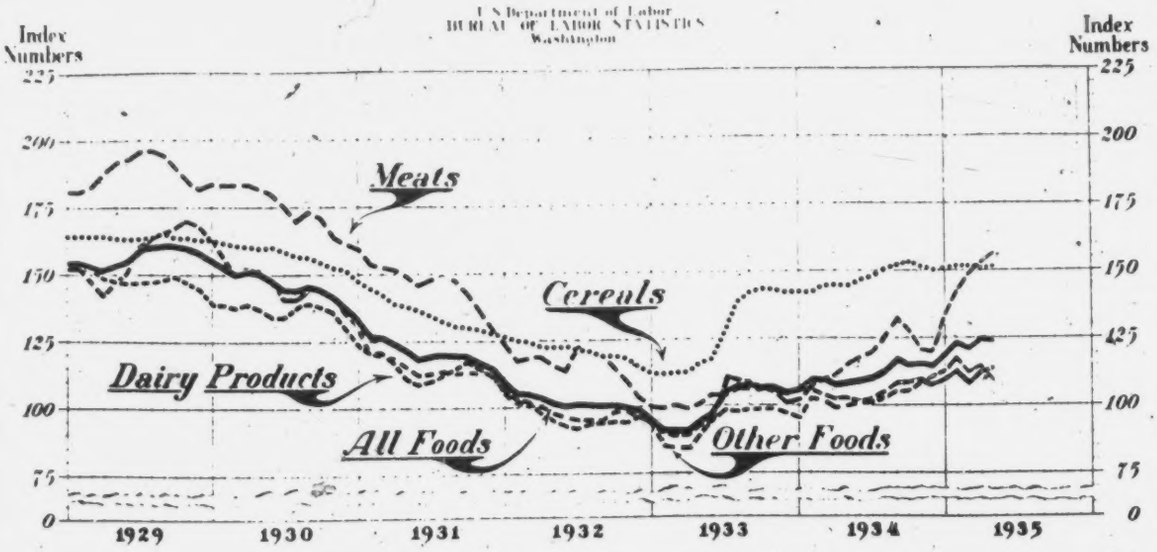
(Here follows 1 drawing, folio 989.)

Plaintiff's Ex. 71

RETAIL COST of FOOD

1913 100

U.S. Department of Labor
BUREAU OF LABOR STATISTICS
Washington

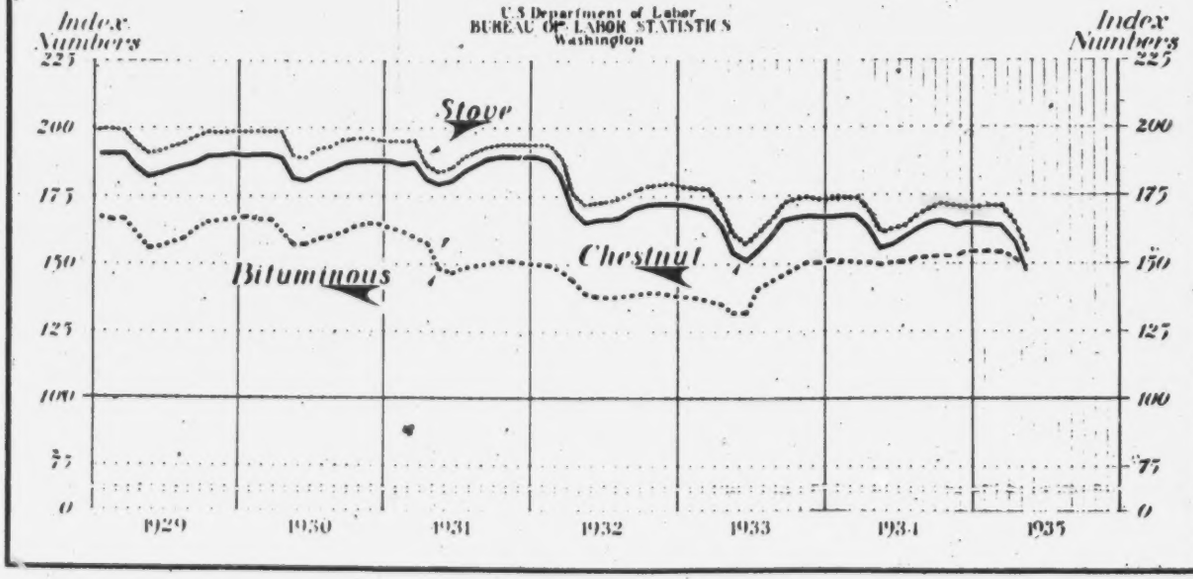


RETAIL PRICES of COAL

BITUMINOUS & PENNSYLVANIA ANTHRACITE STOVE & CHESTNUT

1913 - 100

U.S. Department of Labor
BUREAU OF LABOR STATISTICS
Washington



[fol. 989-a] PLAINTIFF'S EXHIBIT 72

Deficit of Specified Industrial Groups, 1928-1932

NOTE.—1928-1932, inclusive, are the only years for which separate figures on bituminous coal mining corporations are given in "Statistics of Income," compiled from income tax returns by Income Tax Unit of Treasury Department.

Mining and quarrying:	
Coal: Anthracite	$2,011,000 Deficit
Coal: Bituminous, Lignite, and peat	117,313,000 Deficit
Oil and gas	137,722,000 Deficit
Manufacturing:	
Woolen and worsted goods	115,135,000 Deficit
Finishing and tanning leather and manufacturing leather products other than boots, shoes, slippers, etc.	96,724,000 Deficit
Tires and tubes	110,937,000 Deficit
Forest products (lumber and wood products)	370,109,000 Deficit
Radios, complete or parts	41,096,000 Deficit
Miscellaneous:	
Ship building and repairing	5,537,000 Deficit
Aerial transportation	45,556,000 Deficit
Theatres, legitimate, vaudeville, etc.	33,740,000 Deficit

Source: Compiled from annual reports on "Statistics of Income," Bureau of Internal Revenue, United States Treasury Department.

[fol. 990] PLAINTIFF'S EXHIBIT 72-A

Net Income or Deficit of Specified Industrial Groups, 1928–1932

Note: 1928–1932, inclusive, are the only years for which separate figures on bituminous coal mining corporations are given in "Statistics of Income," compiled from income tax returns by Income Tax Unit of Treasury Department.

In thousands of dollars
D indicates deficit

	1932	1931	1930	1929	1928	Net Result 1928–1932
Mining and Quarrying						
Coal: Anthracite	16,697 D	1,614 D	8,109	2,940	5,251	2,011 D
Coal: Bituminous, lignite and peat	51,167 D	47,745 D	42,071 D	11,822 D	24,508 D	177,313 D
Oil and Gas	46,760 D	120,883 D	9,462 D	29,602	3,481	137,722 D
Manufacturing						
Woolens and worsted goods	37,191 D	31,243 D	35,327 D	10,294 D	1,080 D	115,135 D
Finishing and tanning leather and manufacturing leather products other than boots, shoes, etc.	31,364 D	36,802 D	35,525 D	3,693 D	10,660	96,724 D
Tires and tubes	28,180 D	16,835 D	52,241 D	3,170	16,851 D	110,937 D
Radios, complete or parts	13,312 D	28,270 D	12,610 D	2,964 D	16,060	41,096 D
Forest products (lumber and wood products)	207,118 D	184,172 D	116,636 D	67,113	70,704	370,109 D
Construction						
Shipbuilding and repairing	1,565 D	3,223 D	1,280	819 D	1,210 D	5,537 D
Transportation						
Aerial transportation	6,029 D	14,610 D	19,152 D	6,489 D	724	45,556 D
Service						
Theaters, legitimate, vaudeville, etc.	20,702 D	6,134 D	4,557 D	499 D	1,848 D	33,740 D

Source: Compiled from "Statistics of Income," Income Tax Unit of United States Treasury Department.

(Here follows 1 photolithograph, folio 991.)

Plaintiff's Exhibit No. 72-B

LIST OF MAKES OF PASSENGER CARS MADE COMMERCIALLY IN THE UNITED STATES SINCE THE BEGINNING OF THE AUTOMOBILE INDUSTRY SHOWING THOSE MAKES NO LONGER BEING MADE IN FIRST NINE MONTHS OF 1935

A line through a name indicates that automobiles of that make were not being manufactured in the first nine months of 1935; an asterisk (*) before the name indicates that that make was produced during the first nine months of 1935.

AUTOCAR
APPERSON
*AUBURN
AUTO-DYNAMIC
AJAX
AKRON
AUTO-MOTOR
AMERICAN-(Elec.)
AMERICAN-(Gas)
AMERICAN-(Steam)
AUTO-VEHICLE
ADAMS-FARWELL
AEROCAR
AURORA
ATLAS
ALLEN-KINGSTON
ALBANY
ANCUS
ALCO
AMERICAN
APEX
ALPENA
ABBOTT-DETROIT
ARGO-(Elec.)
ALLEN
ANDERSON
ALTER
AMERICAN
ACE
AMBASSADOR
ADRIA
AJAX
*AUSTIN
BAKER
BALDWIN
BACHELLER
BOLTE
BUFFALO-(Elec.)
*BUICK
BALDNER
BINNEY & BURNHAM

CANDA
CENTURY (Steam)
COTTA
CUNNINGHAM (Steam)
CONRAD
CLARK
CARLSEA
CAPITOL
CLOUGHLEY
*CADILLAC
COVERT
CRESTMOBILE
CLEVELAND
CHEVAUR
CINCINNATI (Steam)
CLARKOBILE
CHAST
CHURCH
CORBIN
COLUMBUS (Elec.)
CRAWFORD
CHENRON
COLBURN
CARTARCAR
COSMOPOLITAN
CATO
C.V.I.
CONTINENTAL
C.P.
COMET
CHALLS-COZZEN
COLT
CHALMERS
CHAMPION
CASE
COLE
CHADWICK
CUTTING
CORREJA
COLBIER
CUNNINGHAM
*CHEVROLET

du PONT
*DUESENBERG
DRIGGS
DURANT
Dr.A.C.
DAGMAR
DIANA
DURANT
*De SOTO
De VALX
EMPIRE
ELMORE
ECLIPSE
ECONOMY
ESSEX
EARL
EVERYBODY'S
Er.Av.L.
ELCAR
EVERITT
EDWARDS-KNIGHT
ENGER
EMPIRE
ELGIN
EAGLE-ROTARY
ESSEX
EARL
ERSKINE
FOSTER
FANNING
FISCHER
FRISBIAN
FRANKLIN
FLINT
FREDONIA
*FORD
FRAYER
FOSTORIA
FRITCHLE (Elec.)
FULTON
FEDERAL

HATFIELD
HAY-BERG
HALLADAY
HEINE-VELOX
*HUPMOBILE
*HUDSON
HERRESHOFF
HENRY
HUPP-YEATS (Elec.)
HENDERSON
HAVERS
HARFF-BROOKS
HOLLIER
HARVARD
HUPPMAN
HARROUN
HACKETT
Hy.Av.L.
HANSON
HOLMES
H.C.S.
HANDLEY-KNIGHT
HARTZ
INTERNATIONAL
IMPERIAL
IROQUOIS
IMPERIAL
INTERSTATE
JACKSON
JEFFERY
JONES-CORBIN
JAXON
JOHNSON
JEWELL
JENKINS
JORDAN
JONES
JEWETT
KENSINGTON
KNOX
KEYSTONE

MONCRIEF
MOHAWK
MATHESON
MOMBA
MODEL
MACKLE-THOMPSON
MITCHELL
MARR
METEOR
MARMON
MORSE
MOLINE
MAXWELL-BRISCOE
MERCURY
MONARCH
MOON
MARYLAND
MORA
MASON
MEDIA
MIER
MIDLAND
McCUE
MEPZ
McINTYRE
MARION
MAXWELL
MERCER
MOLINE
MOTORETTE
MARQUETTE
McFARLAN
MARATHON
MIGHTY-MICHIGAN
MOLINE-KNIGHT
MECCA
MOORE
MADISON
MONITOR
MONROE
MAIBOHM
MARION-HANDLEY

PENNSYLVANIA
POSTAL
PALMER-SINGER
PULLMAN
PERFECTION
PAYNE-MOBERE
PETROL
PATERSON
PAIGE
PILOT
PARRY
PENN
PATHFINDER
PARTIN-PALMER
PILGRIM
PILLIOD
PONDER
PAN-AMERICAN
PIEDMONT
PAN
PARENTI
PORTER
*PONTIAC
*PLYMOUTH
RIKER
REMINGTON
ROBINSON
RHODINS
ROGERS & HANFORD
REDER
RAMBLER
RUSSELL
REGAS
RAPID
*REO
ROYAL-TOURIST
ROTARY
ROSS
RENIER
RAUCH & LANG
REGAL

SIMPLICITY
SPEEDWELL
SAYERS
SWAVER
SPRINGFIELD
SHOEMAKER
STUDEBAKER E.M.F.
*STUDEBAKER
S.G.V.
STUYVESANT
*STUTZ
SAXON
SPHYNX
STERLING-KNIGHT
SCRIPPS-BOOTH
SPENCER
SPAULDING
STEWART
SINGER
STEPHENS
STANDARD
SUN
SIMPLEX-CRANE
SENECA
STATES
SEVERIN
SHAW
SHERIDAN
SKELTON
SPENCER
STANWOOD
STAR
TRIUMPH
PAUPCH
THOMPSON
TWYFORD
TOLEDO
*TEMRAPLANE
THOMAS
TOURIST

-KEEN-
-BALDWIN-
-BACHELLES-
-BOLTE-
-BUFFALO-(Elec.)-
*BUICK
-BALPNER-
-BINNEY & BURNHAM-
-BRAMELL-
-BUFFALO--
-BERG-
-BRASIER-
-BRISTOL-
-BUCKMOBILE-
-BLOOD-
-BUCKEYE-
-BATES-
-BLACK-DIAMOND-
-CHEVERLEY-
-CLOSTROM-
-BERKSHIRE-
-BABCOCK-(Elec.)-
-BRUSH-
-BUCKMOBILE-
-BLACK--
-BAILEY-(Elec.)-
-BYRIDER-(Elec.)-
-BROWNIMAR-
-BENNER--
-BERGDOLL
-BRIGHTON-
-BRISCOE-
-BELL-
-BROWSTER-
-BIDDLE-
-BAM-HUR-
-BOUR-DAVIS
-BIRCH-
-BOMAN-
-BEGGS--
-BAY-STATE-
-BARLEY-
-BLACKHAWK-
-COLUMBIA-(Elec.)-
-CENTURY-(Gas)-
-CROCUS-(Elec.)-
-COLLINS-(Elec.)-
-CHAPMAN-(Elec.)
-CENTURY-(elec.)-
-COLUMBIA-(Gas)-

-CASE-
-COLE-
-CADWICK-
-CUTTING--
-CORREJA-
-COLRIER--
-CUNNINGHAM-
*CHEVROLET
-CHURCHFIELD-
-CHANDLER-
-CAMERON-
-CROW-ELKHART
-COLUMBIA-
-CORBITT--
-COMMONWEALTH
-CLEVELAND-
-COLONIAL--
-CLIMBER-
-COATS-(Steam)-
-CORINTHIAN-
-COURIER-
*CHRYSLER
*CORD
-DURYEA-
-DARLING-
-DESBERON-(Steam)-
-DECKER-
-DARROW--
-DAVENPORT-
-DYER--
-DOLSON-
-DE-LUXE--
-DORRIS-
-DUER-
-DETROIT-ELECTRIC-
-DUROCAR-
-DAVIS
-DE-TAMBLE-
-DETROITER-
*DODGE
-DORT-
-DILE--
-DIAMOND-
-DANIELS-
-DIXIE-FLYER-
-DISPATCH-
-DOBLE-(Steam)-
-DISBROW-
-DOUGLAS-

-FLINT-
-FREDONIA-
*FORD
-FRAYER-
-FOSTORIA-
-FRITCHIE-(Elec.)-
-FULTON-
-FEDERAL-
-FLANDERS--
-FULLER-
-FARMACK-
-F.-R.-P.-
-FENRIS-
-FOX--
-FRIEND-
-FALCON-
-FREMONT-
-FIAT-
-FLINT-
-FALCON-
-GROUT-
-GREAT-(Pierce-Arrow)-
-GURLEY-
-GASMOBILE-
-GENEVA-
-GLIDE-
-GENERAL-
-GREENLEY-
-GIBBS-(Elec.)
-GRAHAM--
-GARFORD-
-GREAT-SMITH-
-GAYLORD-
-GREAT-WESTERN-
-GRANT-
-GHENT-
-GARDNER-
-GEARLESS-
-GRAY-
-GRAHAM PAIGE-
*GRAHAM
-HAYNES-APPERSON-
-HOLYOKE-
-HAYNES--
-HOWARD--
-HOFFMAN-(Steam)
-HUDSON-(Steam)-
-HOLLEY-
-HOLSMAN-
-HEWITT--

-JENKINS-
-JORDAN-
-JONES-
-JEWETT-
-KENSINGTON-
-KNOX-
-KEYSTONE-
-KIDDER-
-KUNZ-
-KONIGSLAW-
-KING-
-KISSEL-
-KENTON--
-K.R.I.P.-
-KLINE-
-KERNS-
-KENT-
-KELSEY-
-KENSORNY-
-KURTZ-
-LOCOMOBILE-
*La FAYETTE
-LRACH-
-LANE-(Steam)-
-LEWIS--
-LOOMIS-
-LOZIER-
-LOGAN-
-LUVERNE-
-LORRAINE-
-LINCOLN-
-LEXINGTON-
-LAMBERT-
-LYON-
-LENOX-
-LYONS-KNIGHT-
-LEWIS-
-LAUREL--
-LIBERTY-
-LORRAINE-
-LAFAYETTE-
-LEACH-WILLWELL
*LINCOLN
-LONE-STAR-
-LONG-
*La SALLE
-MOBILE--
-MARLBORO-
MILWAUKEE-

-KAPLD-
*KEO
-ROYAL-TOURIST-
-ROTARY--
-ROSS-
-RENIER-
-RAUCH & LANG-
-REGAL-
-ROADER-
-R.C.H.-
-REPUBLIC-
-RIDDLE-
-ROAMER-
-REVERE-
-ROCK-FALLS--
-R & V-KNIGHT
-RANGER-
-ROLLS-ROYCE-
-RICKENBACKER-
-RUBAY--
-ROLLIN-
-ROOSEVELT-
-RUXTON--
-ROCKNE-
-STANLEY-(Steam)
-STEARNS-(Steam)
-ST.-LOUIS-
-SPAULDING
-SKENE--
-SUNSET-
-SHAIN-
-SMITH & MABLEY-
-STEAMOBILE-
-STEVENS-DURYEA-
-STORCK-
-STANDARD-
-STUDEBAKER(Elec.)-
-SANDUSKY-
-STEARNS-(Gas)
-SHELBY-
-SANTOS-DUMONT-
-STUDEBAKER-(Gas)-
-SCHNEIDER-
-STURTEVANT-
-SPRINGER-
-STODDARD-DAYTON-
-SAMPSON-
-SCHACHT--
-SELDEN--
-SUCCESS-
-SINGLE-CENTER-
-SENATOR-
-SULTAN-

-PAUFICH-
-THOMPSON-
-TAYLOR-
-TOLEDO-
*THOMAPLANE
-THOMAS--
-TOURIST-
-TINCHER-
-THOMBULL-
-TWOMBLY-
-TOURAINE-
-THAPLAR-
-TEXAN-
-TULSA-
-U.S.-LONG-DISTANCE-
-UPTON-
-U.-S.-
-VAUGHAN-
-VICTOR-
-VELIE-
-VOGUE-
-VIKING-
-WINTON-
-WHITNEY-
-WOODS-
-WALTHAM-
-WALLS-
-WARWICK-
-WHITE-(Steam)
-WILDMAN-
-WALTHIER-
-WELCH-
-WAVERLY-(Elec.)-
-WAYNE-
-WOLVERINE-
-WALWORTH-
-WLF-
-WASHINGTON-
-WHITE-
-WARREN--
-WHITING-
-WESTCOTT-
-WILLYS-KNIGHT-
-WILLYS-SIX-
-WOODS-
-WINCHER-
-WALTHAM-
-WILLS-STE.-CLAIRE-
-WIPPET-
-WOLVERINE-
-WINDSOR-
*WILLYS
-YALE-
-YORK-
-ZIMMERMAN-

Source: Motor Magazine

PLAINTIFF'S EXHIBIT 73

Average Hourly Wage Rates Paid Common Labor

Note: Rates in cents per hour. Data are based on entrance rates paid unskilled adult males in important industries requiring considerable numbers of common laborers.

As of July 1 of each year

Industry and geographic division	Average hourly entrance rates (in cents) in—								
	1926	1927	1928	1929	1930	1931	1932	1933	1934
Automobile	46.1	46.3	57.2	49.9	48.2	57.7	62.0	46.5	54.9
Brick, tile and terra cotta	40.7	42.2	39.4	37.8	38.0	33.9	28.9	24.7	36.9
Cement	40.1	39.2	37.2	37.8	37.9	37.2	30.6	29.5	44.7
Electrical machinery, apparatus, and supplies	43.1	44.2	46.0	45.9	44.8	42.9	39.6	37.1	43.5
Foundry and machine-shop products	37.1	37.8	38.4	39.8	39.0	38.2	34.8	31.8	40.1
Iron and steel	42.7	43.2	42.5	42.5	42.1	41.8	31.8	33.6	43.2
Leather	40.9	41.4	42.3	42.2	41.9	39.1	32.9	31.6	39.3
Lumber (sawmills)	33.6	32.2	31.7	32.0	31.6	27.7	21.5	20.8	33.1
Paper and pulp	42.8	42.5	44.3	44.0	43.2	37.2	35.6	32.6	40.3
Petroleum refining	47.9	44.0	45.4	45.7	48.1	47.5	42.1	40.7	52.6
Slaughtering and meat packing	41.5	41.7	42.2	42.0	41.8	41.7	34.6	32.3	43.9
Public utilities	42.0	39.8	42.9	42.8	44.6	44.6	41.5	38.7	41.8
General contracting	47.1	48.2	47.4	48.3	47.0	42.6	39.9	38.3	45.5
All industries	42.8	42.6	44.9	43.7	43.1	41.2	38.1	35.0	43.0
All industries except general contracting	40.9	40.4	44.1	42.1	41.6	40.7	37.6	34.2	42.3
New England	47.1	46.7	48.2	48.0	49.5	45.4	40.4	37.1	43.3
Middle Atlantic	45.1	47.2	47.8	46.4	46.1	45.1	40.4	36.7	45.2
East North Central	48.0	46.7	51.6	48.4	47.0	45.2	45.0	38.9	47.0
West North Central	40.1	40.6	41.3	41.8	40.6	42.9	35.8	34.5	43.2
South Atlantic	32.8	31.5	29.4	30.2	32.1	28.9	23.4	25.3	33.6
East South Central	27.6	27.0	26.0	26.8	26.7	25.2	21.0	25.7	34.1
West South Central	32.5	31.8	33.8	35.6	33.0	29.9	23.7	23.4	32.7
Mountain	44.4	44.4	44.0	44.9	45.2	43.1	39.3	42.3	46.4
Pacific	45.9	46.5	46.9	47.9	47.6	43.5	40.2	38.0	46.9

Source: Bureau of Labor Statistics.

Table 333, Page 303, Statistical Abstract, 1934, Except 1934 Figures Which are from Serial No. R. 196 (Dec. 1934 Issue of Monthly Labor Review).

(Here follow Plaintiff's Exhibit 73A, folio 993, and Plaintiff's Exhibit 74, folios 994 to 997.)

Plaintiff's Ex, 73-A 952A

AVERAGE HOURLY WAGE RATES PAID FOR ADULT MALE COMMON LABOR IN IMPORTANT INDUSTRIES REQUIRING CONSIDERABLE NUMBERS OF COMMON LABORERS

For Specified Geographic Divisions, 1926 - 1934

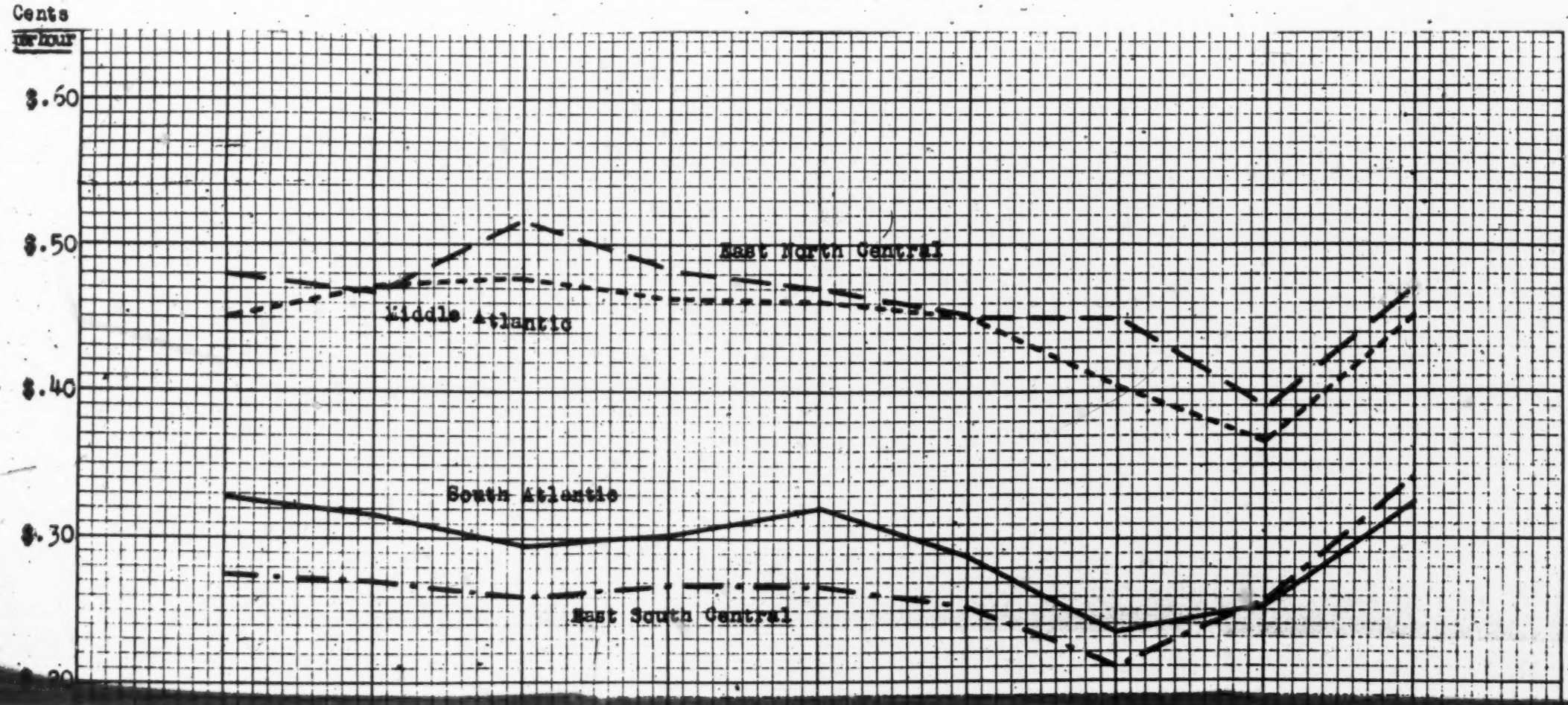
As of July 1 of each year

— — — — East North Central States (Ohio, Ind., Ill., Mich., and Wis.)

- - - - - - - - - Middle Atlantic States (N.Y., N.J., and Pa.)

——————— South Atlantic States (Del., Md., Va., W.Va., N.C., S.C., Ga., and Fla.)

— · — · — · East South Central States (Ky., Tenn., Ala., and Miss.)

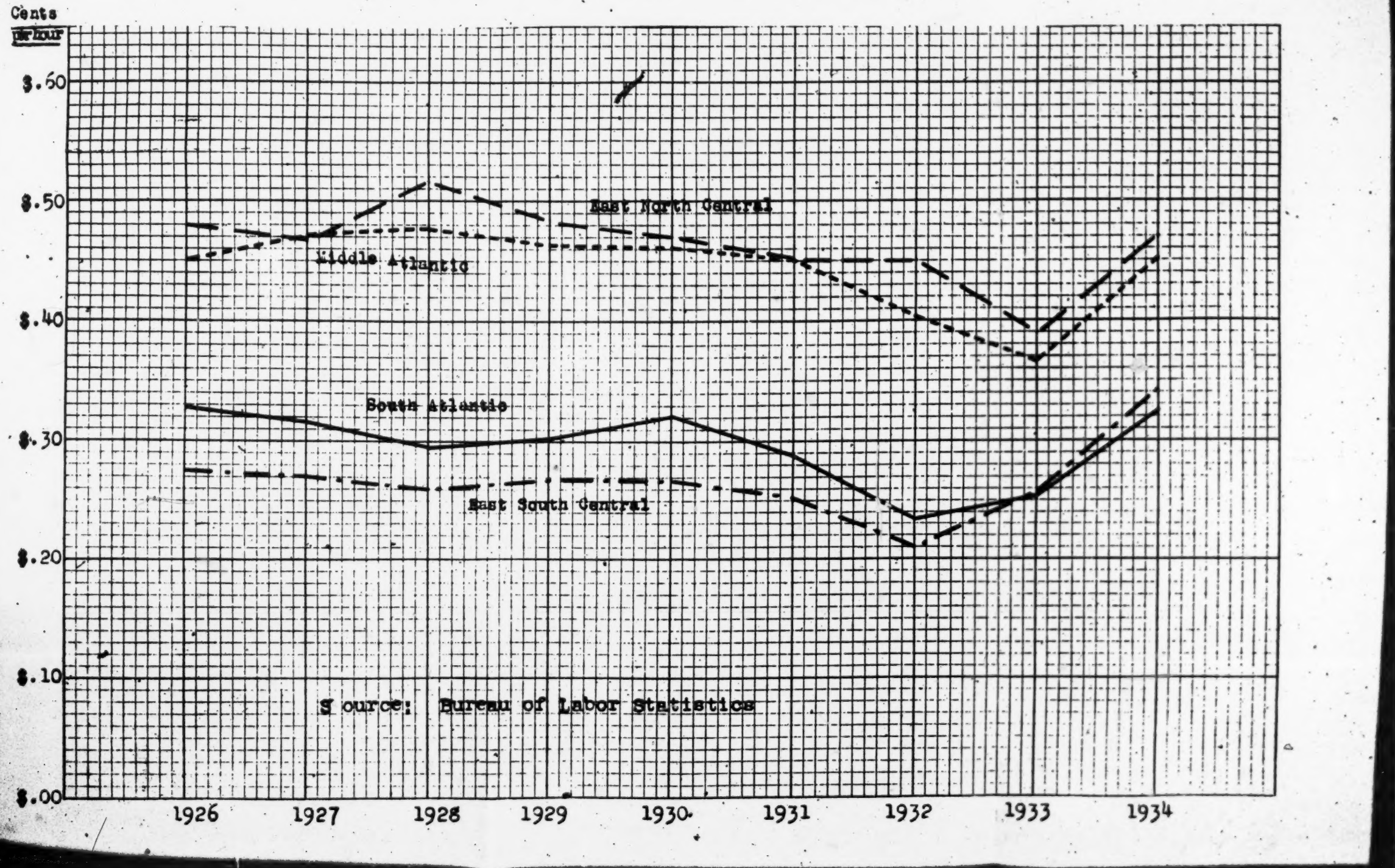


— — — — East North Central States (Ohio, Ind., Ill., Mich., and Wis.)

- - - - - - - - - Middle Atlantic States (N.Y., N.J., and Pa.)

———————— South Atlantic States (Del., Md., Va., W.Va., N.C., S.C., Ga., and Fla.)

— · — · — · East South Central States (Ky., Tenn., Ala., and Miss.)



Source: Bureau of Labor Statistics

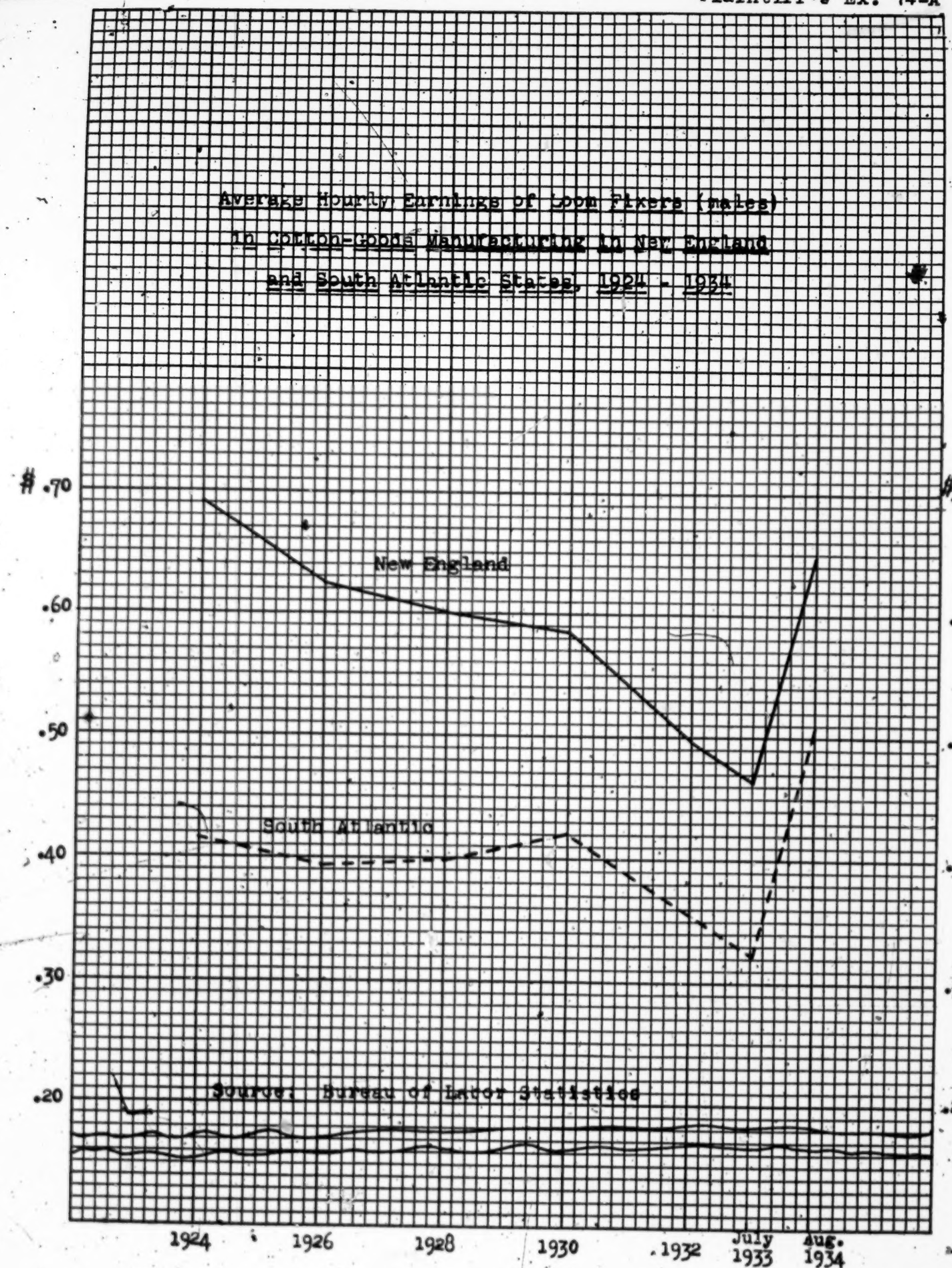
Table 1. Average Hourly Earnings in Cotton-Goods Manufacturing in New England and South Atlantic States, 1924–34, by Occupations

Occupation	1924	1926	1928	1930	1932	July 1933	August 1933	August 1934
New England								
Males	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Loom fixers	60.1	62.4	60.0	58.5	49.6	46.3	63.1	64.9
Slasher tenders	61.7	53.9	51.2	49.7	43.1	(1)	(1)	(1)
Warp-tying machine tenders	58.5	53.0	49.8	49.0	40.1	35.0	48.0	50.1
Card grinders	56.9	50.7	49.4	47.8	38.5	34.2	48.3	50.4
Weavers	53.8	46.7	44.7	46.2	35.3	29.9	43.9	44.2
Slubber tenders	55.5	49.8	46.8	46.6	37.5	30.8	46.6	49.1
Spooler tenders	51.4	46.5	44.5	45.2	35.0	29.6	43.6	45.5
Card tenders	46.5	41.6	40.5	40.2	32.8	28.8	40.7	41.7
Doffers	45.3	39.9	39.3	38.6	31.8	27.0	41.7	43.8
Picker tenders	43.6	38.4	37.2	36.2	30.4	28.6	40.6	41.0
Drawing-frame tenders	39.6	35.5	35.1	35.1	29.3	25.9	38.3	39.2
Females								
Weavers	48.6	42.8	41.8	42.6	33.1	28.0	42.6	43.5
Drawers-in, hand	44.5	42.3	40.3	40.6	32.0	33.6	43.6	43.1
Spooler tenders	44.2	39.5	38.0	36.3	32.1	24.9	39.8	40.4
Warpers	44.3	40.4	37.7	36.0	29.8	28.4	39.2	40.0
Spinners, frame	42.5	37.0	35.9	34.9	27.7	23.6	37.3	37.8
Drawing-frame tenders	35.1	31.7	31.3	32.4	25.6	24.0	35.6	35.4
Creelers	32.9	29.1	28.6	29.0	24.9	24.6	33.6	34.6
Spooler tenders	39.0	31.8	30.7	29.2	25.2	22.3	36.4	38.0
Trimmers or inspectors	31.9	27.9	27.0	27.9	22.3	21.4	33.3	33.5
South Atlantic and Alabama								
Males								
Loom fixers	41.6	39.5	39.9	42.0	35.5	32.3	49.8	50.7
Slasher tenders	33.4	31.7	32.3	32.4	27.9	(1)	(1)	(1)
Warp-tying machine tenders	37.5	36.1	35.9	37.1	31.0	24.9	42.4	43.4
Card grinders	37.8	35.4	35.8	36.2	31.4	27.1	44.2	44.4
Weavers	35.9	33.2	34.1	34.9	28.9	23.8	39.6	40.3
Slubber tenders	33.1	31.2	31.7	32.1	26.4	21.1	37.2	37.4
Spooler tenders	33.9	31.8	31.7	32.0	26.0	21.5	36.5	36.7
Card tenders	26.8	25.3	26.0	26.4	21.8	19.1	32.4	32.5
Doffers	28.4	27.4	28.0	28.7	23.5	19.6	34.5	35.0
Picker tenders	24.4	24.4	23.2	23.9	20.5	17.1	30.9	31.3
Drawing-frame tenders	26.8	25.8	26.2	26.1	21.5	19.2	32.7	33.7
Females								
Weavers	31.3	29.8	30.8	31.9	27.3	21.5	38.6	38.4
Drawers-in, hand	28.1	27.7	29.7	29.8	24.0	23.0	38.3	39.4
Spooler tenders	29.6	27.5	28.5	28.3	24.2	19.6	34.5	35.3
Warpers	29.8	27.3	27.1	28.6	22.9	19.4	29.0	33.3
Spinners, frame	23.4	22.2	22.8	22.5	18.5	16.2	32.2	32.0
Drawing-frame tenders	20.2	19.8	20.4	21.3	17.4	15.4	31.2	30.8
Creelers	23.0	22.7	22.1	23.3	19.2	15.8	31.6	31.0
Spooler tenders	22.1	20.6	20.9	22.7	18.8	16.1	32.7	33.3
Trimmers or inspectors	20.3	20.2	20.8	20.9	18.2	15.9	31.0	31.0

Source: Monthly Labor Review—May, 1935, Department of Labor

9528

Plaintiff's Ex. 74-A



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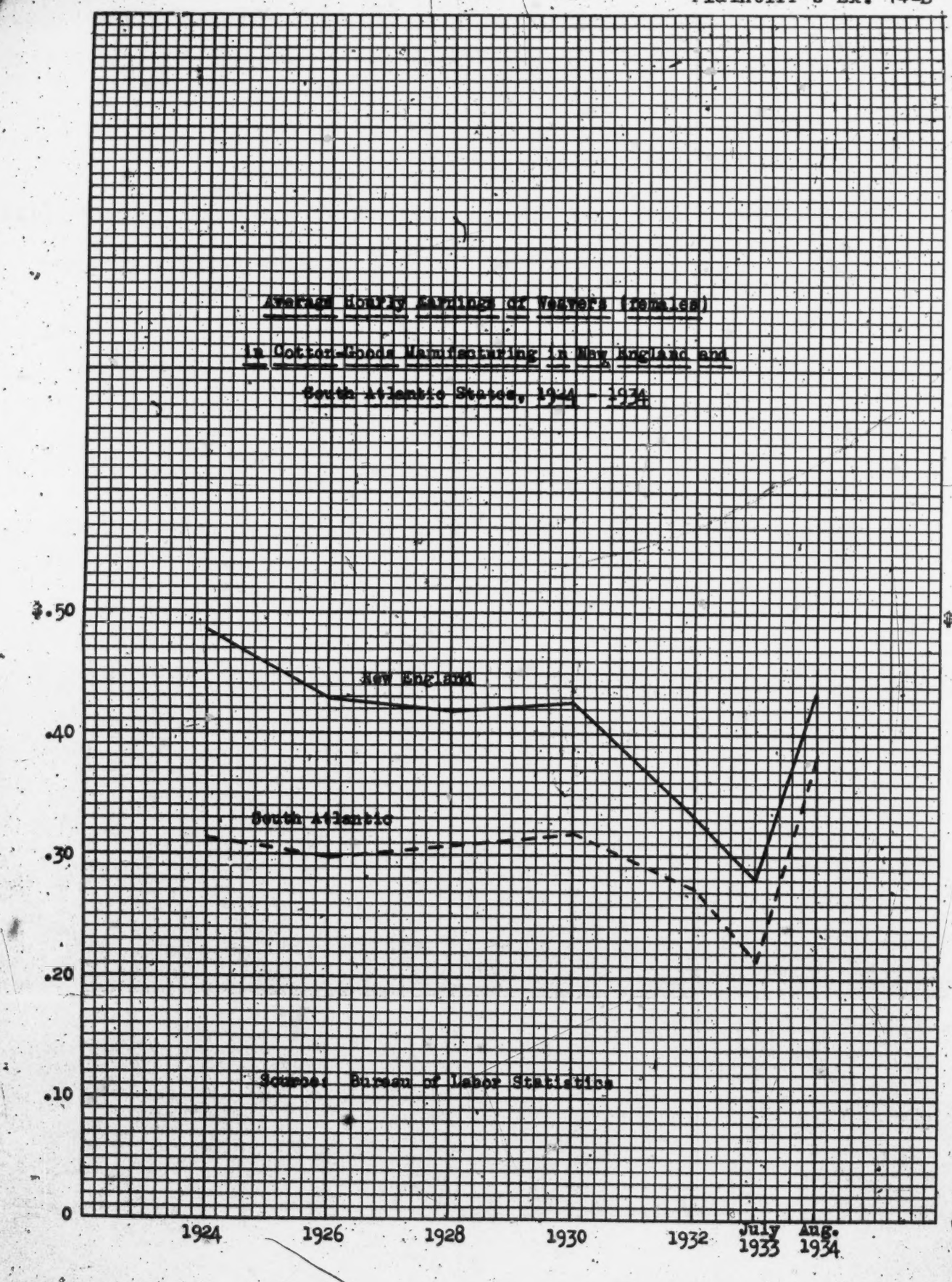
Plaintiff's Ex. 74-B



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Plaintiff's Ex. 74-C

Table 2.—Ratio of Average Hourly Earnings in New England to those in South Atlantic States, by Occupations

Occupation	Sex	Average ratio 1920-32	1912	1913	1914	1916	1918	1920	1922	1924	1926	1928	1930	1932	July 1933	August 1933	August 1934
Slasher tenders	Male	164.8	166.0	175.6	182.2	189.1	188.0	150.7	191.9	184.7	170.0	158.5	153.3	154.4	(1)	(1)	(1)
Spinners, frame	Female	159.0	140.1	144.1	141.1	171.2	162.4	134.2	168.7	181.6	166.6	157.4	155.1	149.7	145.7	115.8	118.1
Picker tenders	Male	158.3						140.2	172.1	178.6	157.3	160.3	151.4	148.2	167.3	131.4	131.0
Card tenders	do	157.6	127.6	125.8	125.6	142.6	154.3	138.7	168.5	173.5	164.4	155.7	152.2	150.4	150.8	125.8	128.3
Loom fixers	do	149.4	146.8	144.0	148.8	163.7	165.8	133.7	160.1	166.1	157.9	150.3	139.2	139.7	143.3	126.7	126.0
Slubber tenders	do	148.8				157.6	164.0	127.5	152.0	167.6	159.6	147.6	145.1	142.0	146.0	125.3	131.3
Spooler tenders	Female	148.1				166.3	162.5	130.9	166.0	176.4	154.3	146.8	128.6	134.0	138.5	111.3	114.1
Drawers-in, hand	do	144.5				161.8	172.8	133.2	162.2	158.3	152.7	135.6	136.2	133.3	146.1	113.8	109.4
Doffers	Male	141.2				166.6	147.1	118.7	154.4	159.5	145.6	140.3	134.4	135.3	137.8	120.9	125.1
Warp-tying machine tenders	do	139.5						127.5	148.1	156.0	146.8	138.7	132.0	129.3	140.6	113.2	115.4
Trimmers or inspectors	Female	137.4	145.5	136.9	140.6	158.0	152.5	125.1	165.9	157.1	138.1	129.8	133.4	122.5	134.6	107.4	108.1
Warper tenders	do	136.1				139.2	144.3	121.9	139.6	148.6	147.9	139.1	125.8	130.1	146.4	135.2	120.1
Card grinders	Male	135.6						117.0	146.2	150.5	143.2	137.9	132.0	122.6	126.2	109.3	113.5
Weavers	Male and female.	133.2	128.9	126.4	125.5	143.2	147.7	114.8	143.7	149.2	140.2	132.0	131.6	120.7	126.3	110.4	110.6
Drawing-frame tenders	do	131.0						106.3	136.8	142.9	134.5	131.4	134.1	130.7	130.3	112.9	112.3
Creelers	Female	129.1						114.3	135.2	143.0	128.1	129.4	124.4	129.6	155.7	106.3	111.6
Speeler tenders	Male and female.	128.8						112.0	140.5	139.6	133.8	126.4	121.8	127.6	122.6	113.3	114.6
Weighted average [2]			137.7	137.4	137.4	158.7	157.5	128.2	158.9								
						160.2	157.4	126.7	157.1	164.3	151.7	143.6	139.0	125.8	138.5	115.9	117.6

[1] Included under "Weavers."
[2] See footnote 4 on p. 1172.

Source: Monthly Labor Review--May, 1935, Department of Labor

[fol. 998] PLAINTIFF'S EXHIBIT 74-D

Wage Differential Between North* and South* in Bituminous Coal Mining and Cotton Textile Industries

	Ratio of Average Hourly Earnings in North to Those in South	
	Bituminous Coal Mining	Cotton Textile
1918	.....	157.4
1919	115.2	.....
1920	.....	126.7
1922	109.2	157.1
1924	126.6	164.3
1926	128.4	151.7
1928	.....	143.6
1929	114.8	.....
1930	.....	139.0
1931	119.9	.....
1932	.....	125.8
1933—February	122.5	.....
1933—July	.....	138.5

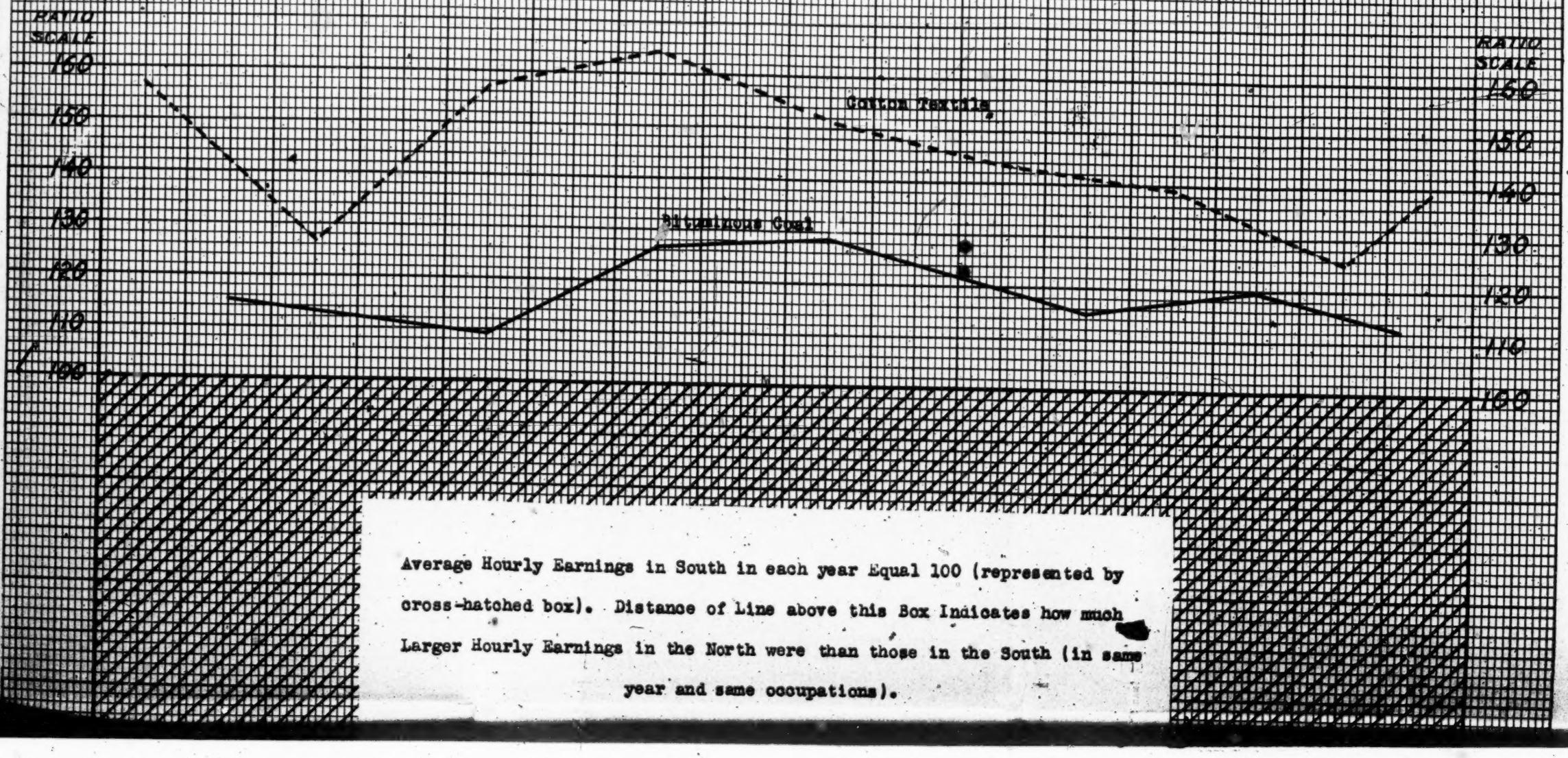
*States represented in bituminous coal mining comparison are:
North—Illinois, Indiana, Ohio and Pennsylvania.
South—Kentucky, Virginia, West Virginia.

State represented in cotton textile comparison are:
North—New England States.
South—South Atlantic States and Alabama.

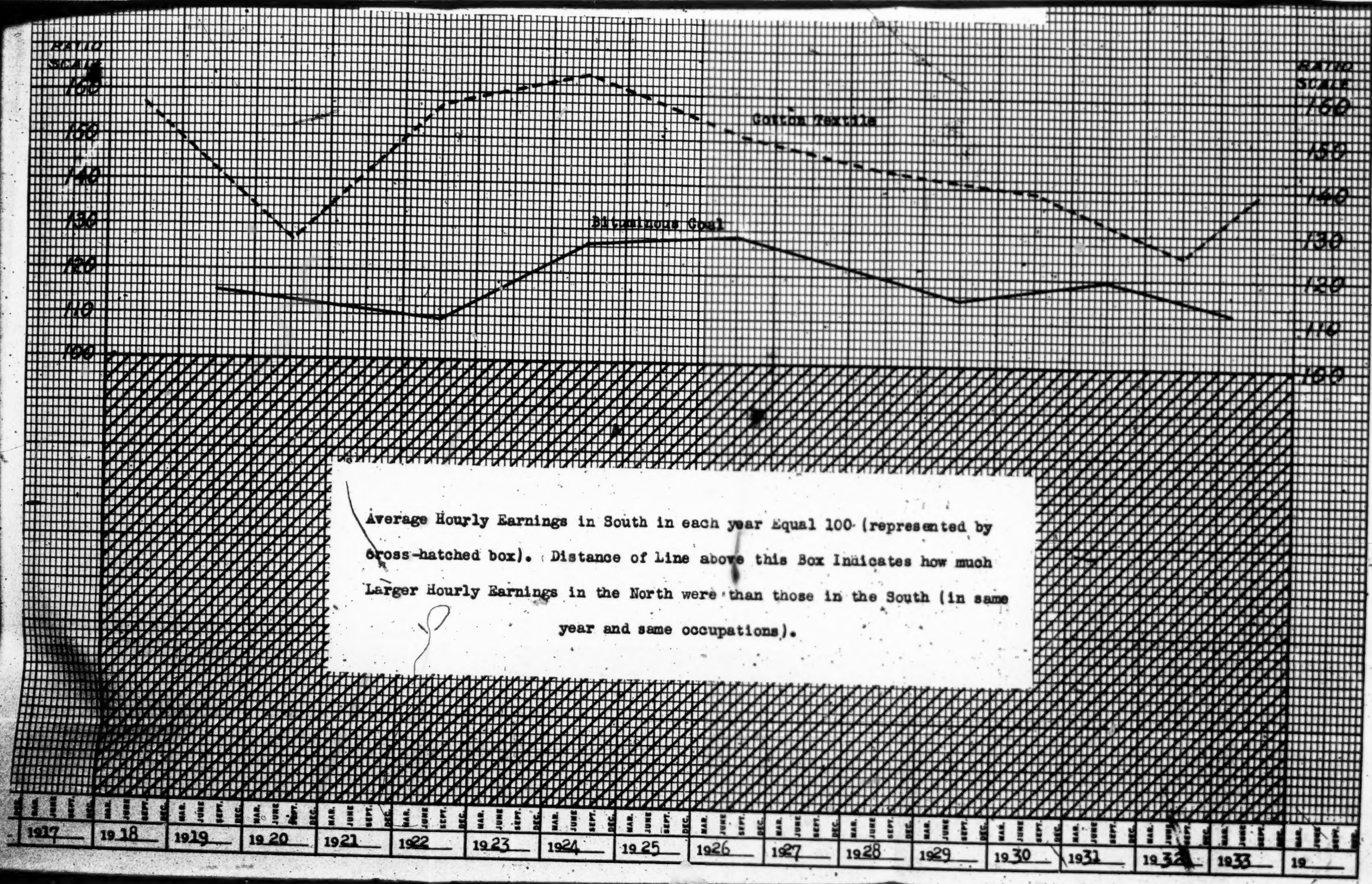
Source: "Historical Review of Wage Rates and Wage Differentials in the Cotton Textile Industry," Monthly Labor Review, May, 1935.
Wage differentials in bituminous coal mining calculated from Defendants' Exhibit 32-A.
(Source: Bureau of Labor Statistics.)

(Here follow Plaintiff's Exhibits 74-E, 75, 75-A, folios 999, 1000, 10001.)

Ratio of Average Hourly Earnings in North to those in South, Separately for Bituminous Coal Mining and Cotton Goods Manufacturing, 1918 - 1933



Average Hourly Earnings in South in each year Equal 100 (represented by cross-hatched box). Distance of Line above this Box Indicates how much Larger Hourly Earnings in the North were than those in the South (in same year and same occupations).


RATIO SCALE
160
150
140
130
120
110
100
Cotton Textile
Bituminous Coal
Average Hourly Earnings in South in each year Equal 100 (represented by cross-hatched box). Distance of Line above this Box Indicates how much Larger Hourly Earnings in the North were than those in the South (in same year and same occupations).
1917
1918
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933

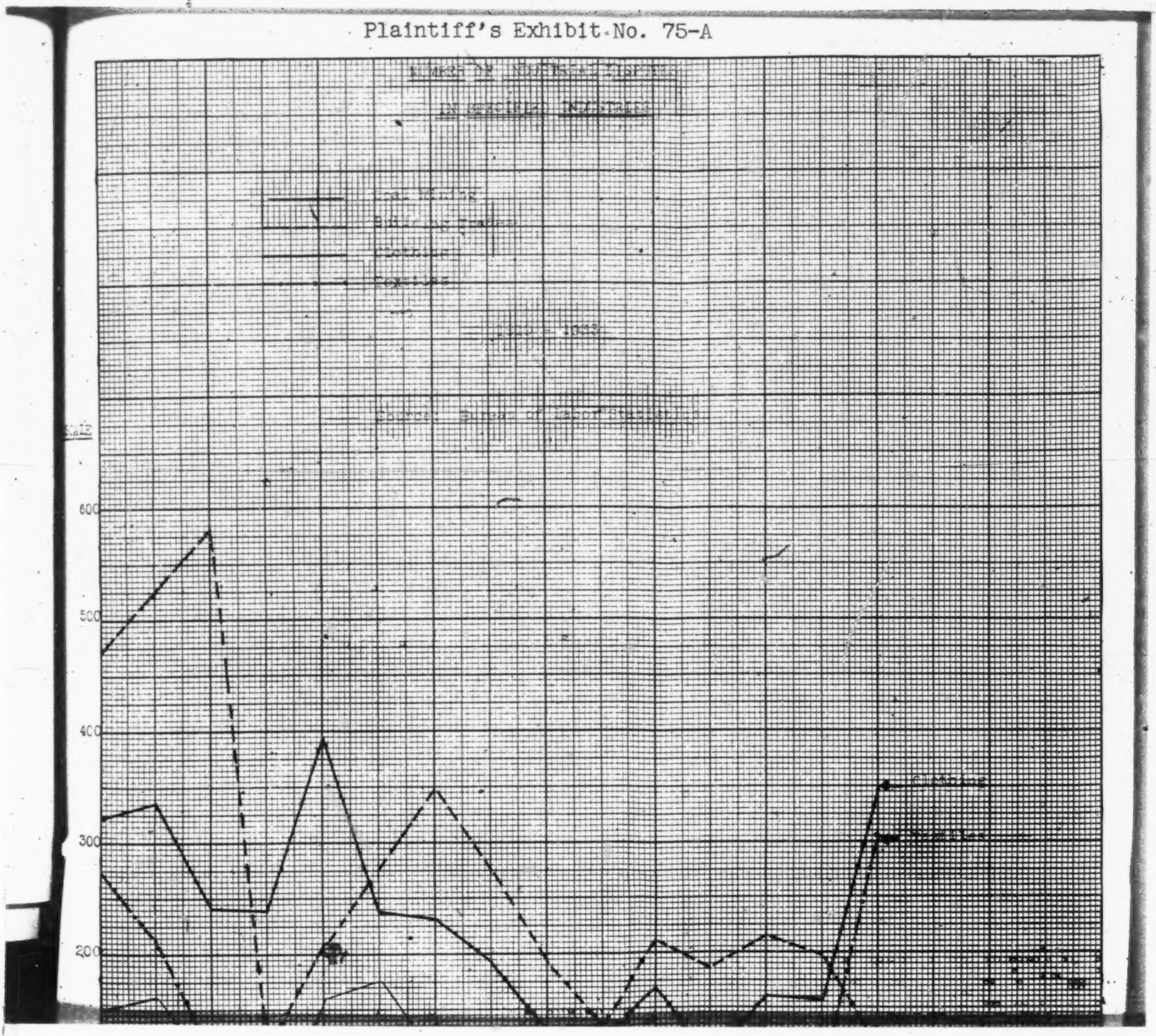
Plaintiff's Ex. 75

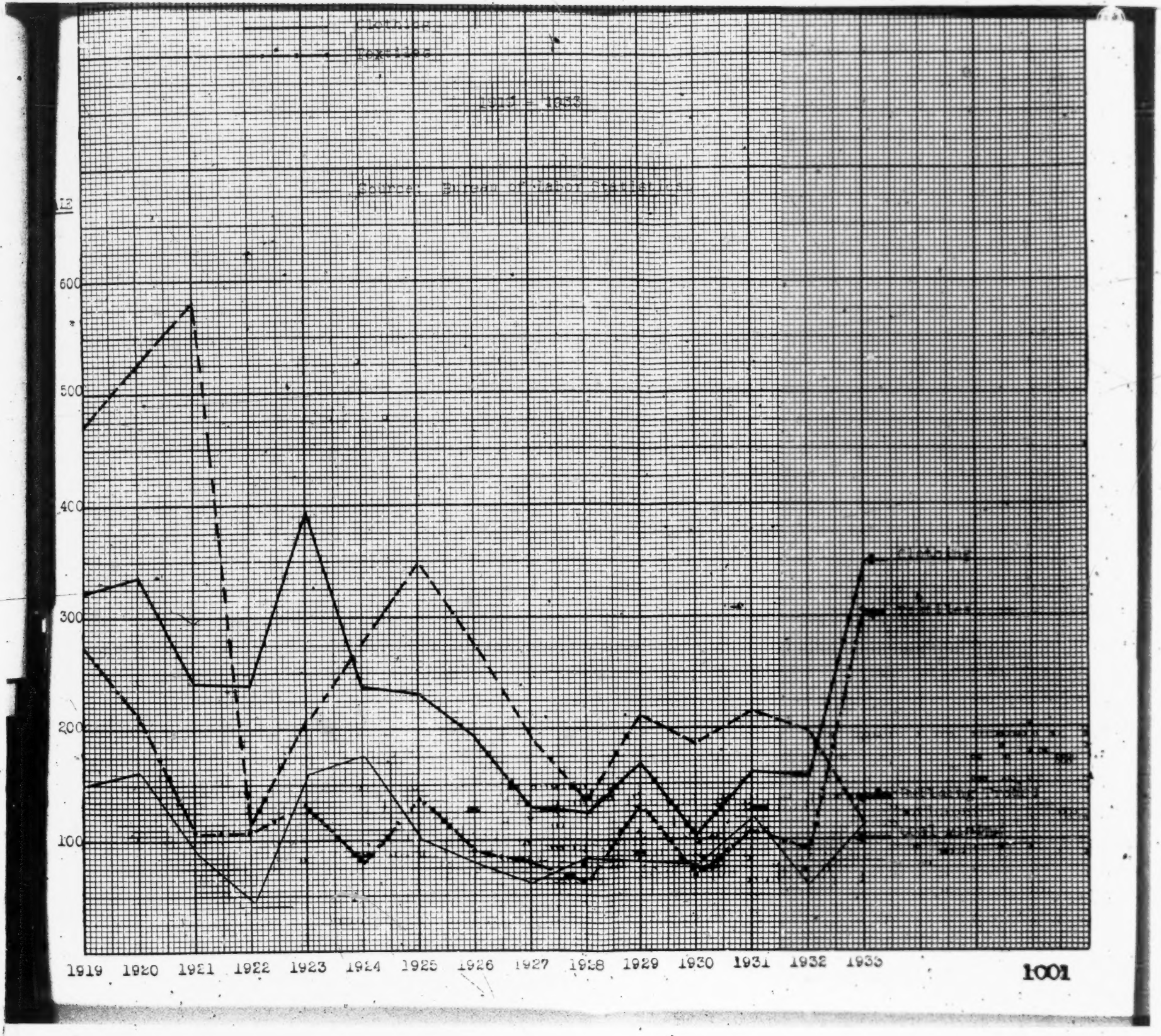
NUMBER OF DISPUTES IN SPECIFIED INDUSTRIES, 1919 to 1933

Industry	Number of disputes														
	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Building trades	473	521	583	113	208	270	349	272	194	134	212	186	215	199	113
Clothing	322	336	240	240	395	238	231	194	129	124	169	103	162	157	347
Furniture	35	26	17	4	12	35	56	46	41	25	32	19	31	22	57
Iron and steel	76	25	25	10	10	7	7	2	2	2	3	3	5	4	10
Leather	27	32	26	17	17	5	5	11	12	5	11	5	14	4	36
Lumber	46	38	25	10	19	6	9	3	3	7	3	3	11	4	12
Metal trades	581	452	194	83	113	58	48	75	19	28	53	28	24	15	91
Mining, coal	148	161	87	44	158	177	100	78	60	83	77	76	119	57	113
Mining, other	28	22	8	5	1	1	4	-	-	-	-	-	-	-	-
Paper manufacturing	47	39	42	12	16	6	6	10	1	2	3	2	1	6	11
Printing and publishing	71	83	506	56	19	12	14	9	22	10	8	11	14	22	17
Shipbuilding	109	45	20	4	6	1	-	-	-	2	1	-	-	-	3
Slaughtering, meat cutting and packing	74	42	30	6	11	14	2	5	5	4	3	-	-	-	11
Stone	13	29	34	61	15	15	17	11	4	8	2	5	6	6	8
Textiles	273	211	114	115	134	80	139	90	80	65	130	67	106	92	315
Tobacco	58	38	19	13	16	12	4	14	3	2	5	2	10	2	21
Transportation, steam and electric	191	241	37	67	31	18	7	8	1	3	5	3	-	1	-

Source: BUREAU OF LABOR STATISTICS

Plaintiff's Exhibit No. 75-A




600
500
400
300
200
100
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933

[fol. 1002] PLAINTIFF'S EXHIBIT 76

Average Number of Days Worked and Days Idle, by Causes, in Bituminous Coal Industry, 1913–1933

Year	Ave. No. of days Worked	Average number of days idle, by causes: All Causes	Strikes, suspensions and lockouts	No market, car shortage and similar difficulties
1913	232	76	5	71
1914	195	113	19	94
1915	203	105	4	101
1916	230	78	4	74
1917	243	65	4	61
1918	249	59	1	58
1919	195	113	25	88
1920	220	88	6	82
1921	149	159	3	156
1922	142	166	78	88
1923	179	129	2	127
1924	171	137	7	130
1925	195	113	2	111
1926	215	93	1	92
1927	191	117	45	72
1928	203	105	8	97
1929	219	89	*	89
1930	187	121	2	119
1931	160	148	3	145**
1932	146	162	19	143**
1933	167	141	9	132**

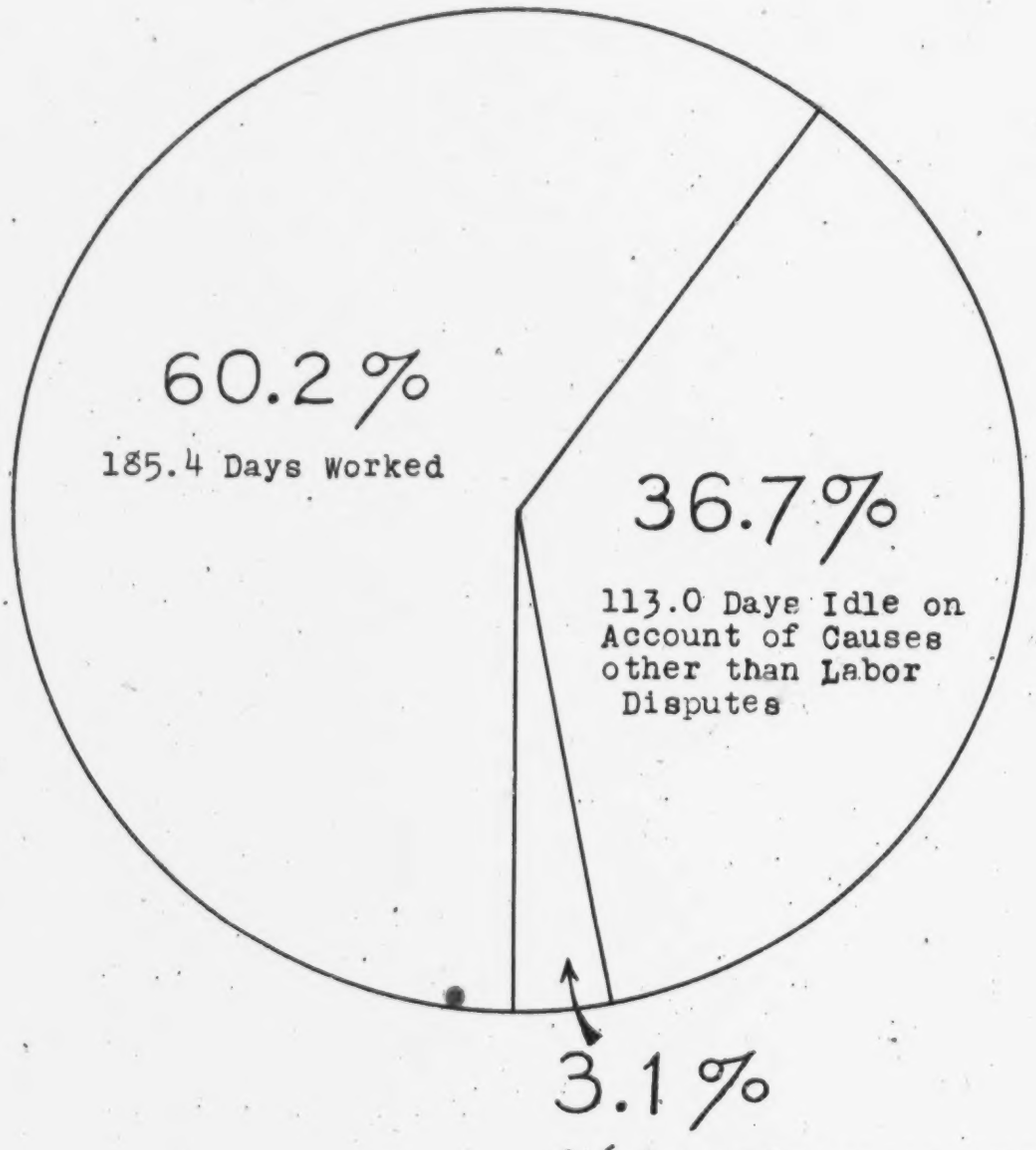
*Less than one-half day.
**Identified merely as "other causes" in reports of Bureau of Mines for 1930 on.

Source: Bureau of Mines.
Source: Figures for years prior to 1931 from Table 5, page 620 of "Coal in 1930," figures for 1931 and later years from Table 1 of annual reports of Bureau of Mines on coal.

(Here follows 1 drawing, folio 1003.)

Percentage of Potential Working Time that Bituminous Coal Miners Worked and were Idle, By Causes, Annual Average, 1924 - 1933

Potential Working Time in Bituminous Coal Mining is Assumed by Bureau of Mines to be 308 days per year



Source: Compiled from reports of Bureau of Mines

[fol. 1004] PLAINTIFF'S EXHIBIT 76-B

Average Number of Days Worked and Days Idle, by Causes, in Bituminous Coal Mining, 1924-1933

	Annual average, 1924-1933	
	Number	%
Days worked	185.4	60.2%
Days idle on account of labor disputes	9.6	3.1
Days idle on account of other causes *	113.0	36.7
Potential working time, in days **	308.0	100.0%

* Such as no market, car shortage and similar difficulties.

** Bureau of Mines assumes potential working time in bituminous coal mining during years represented above to be 308 days per year.

Source: Compiled from reports of Bureau of Mines.

(Here follows chart, folio 1005.)

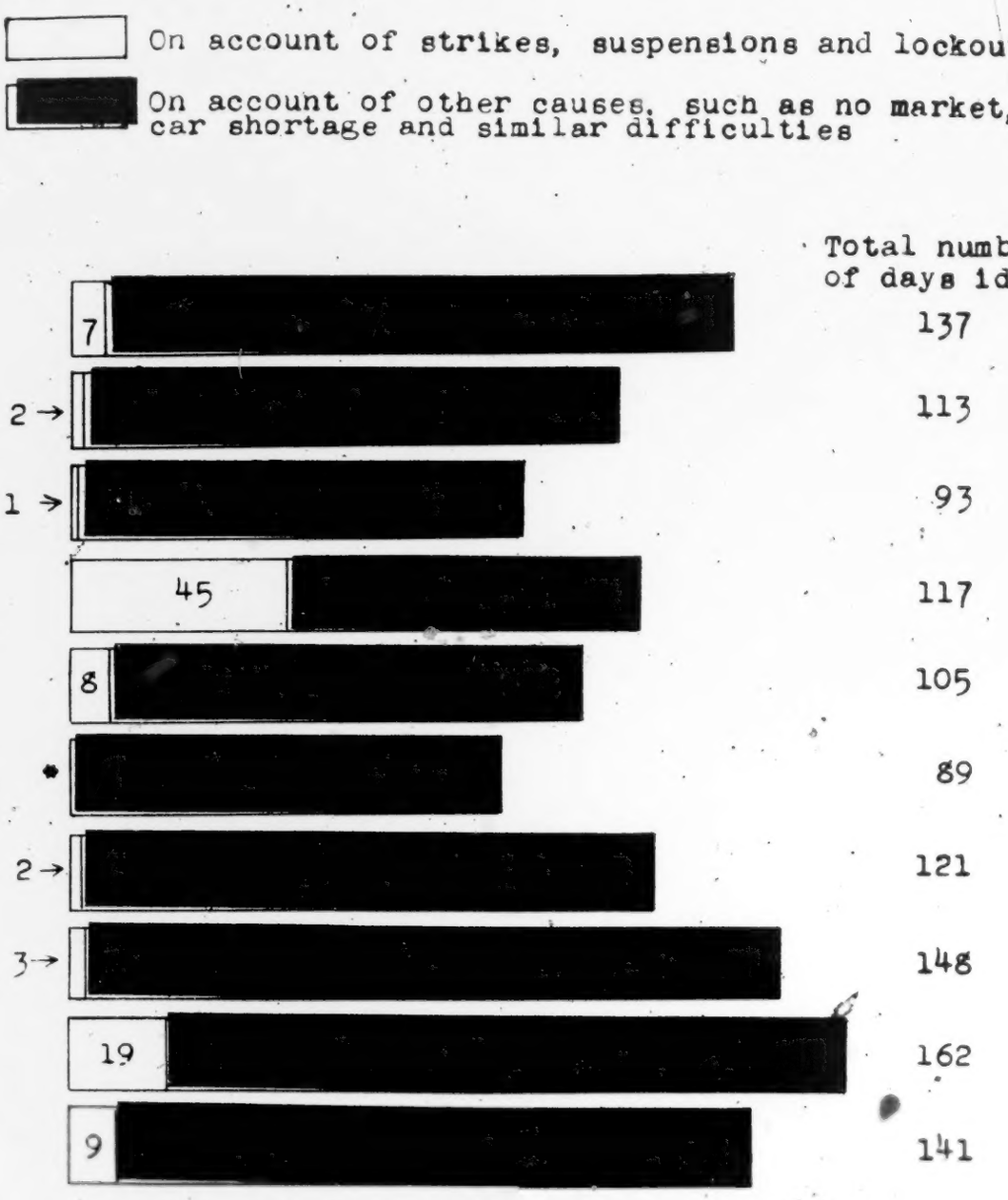
Plaintiff's Exhibit No. 77

Average Number of Days Idle

per Man Employed, by Causes,

1924 - 1933

Bituminous Coal Mining



SOURCE: Bureau of Mines.

[fol. 1006]

PLAINTIFF'S EXHIBIT 77-A

Percent Days Idle Each Year Due to Strikes Is of Total Days Idle in Bituminous Coal Mining, 1924–1933

Year	Average Number of days worked	Average number of days idle			% of Days Idle Due to:	
		All Causes	Strikes	Other Causes	Strikes	Other Causes
1924.....	171	137	7	130	5.11%	94.89%
1925.....	195	113	2	111	1.77	98.33
1926.....	215	93	1	92	1.08	98.92
1927.....	191	117	45	72	38.46	61.54
1928.....	203	105	8	97	7.62	92.38
1929.....	219	89	*	89	*	100.00
1930.....	187	121	2	119	1.65	98.35
1931.....	160	148	3	145	2.03	97.97
1932.....	146	162	19	143	11.73	88.27
1933.....	167	141	9	132	6.38	93.62

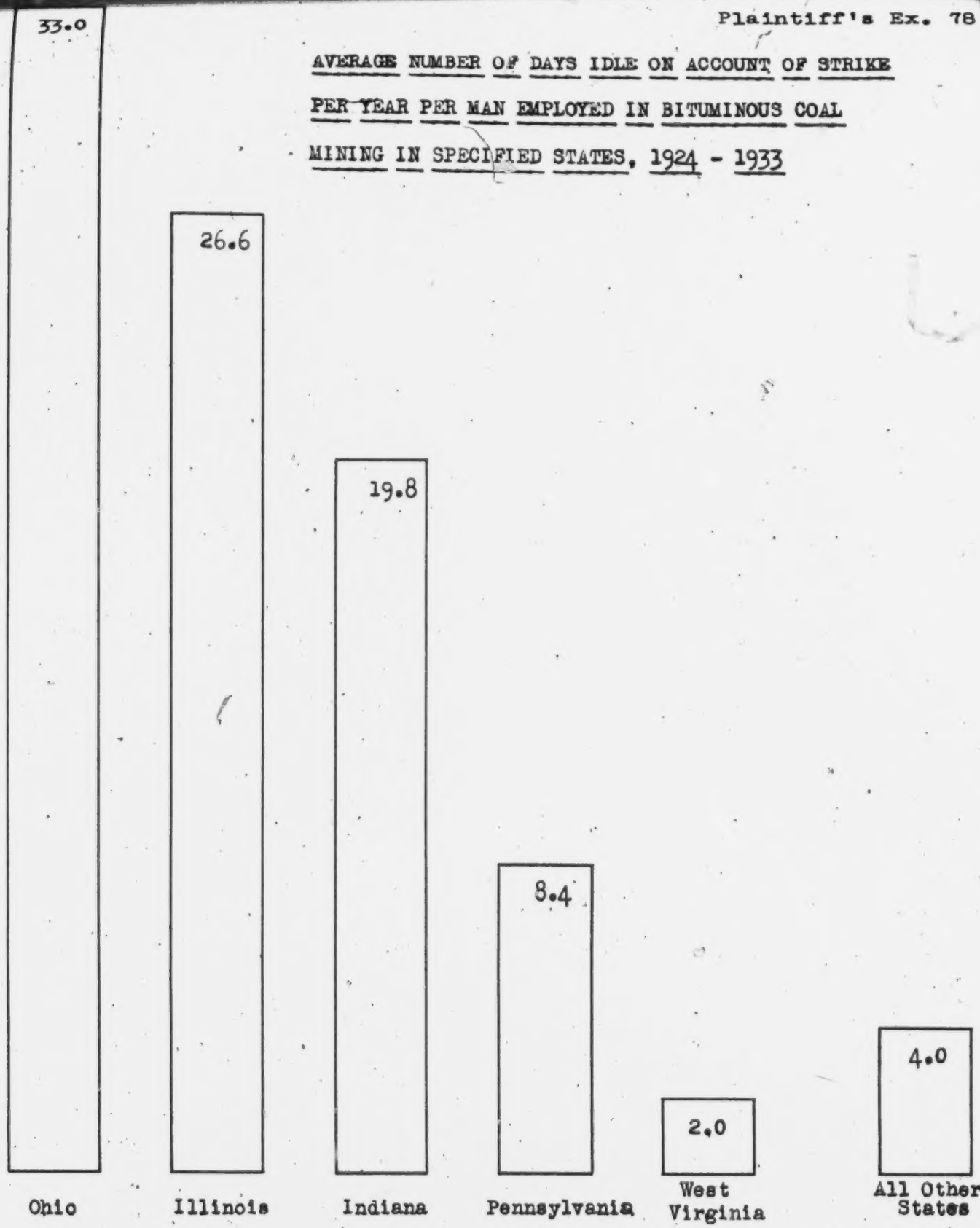
*Less than one-half day.

Source: Compiled from reports of Bureau of Mines.
Source: Percentages were calculated from actual number of days idle by causes. Source of data on actual number of days idle in 1930 and prior years is Table 5, page 620 of "Coal in 1930," Bureau of Mines; data for later years from Table 1 of annual reports of Bureau of Mines on coal.

(Here follow 2 drawings, folios 1007 and 1008.)

Plaintiff's Ex. 78

AVERAGE NUMBER OF DAYS IDLE ON ACCOUNT OF STRIKE PER YEAR PER MAN EMPLOYED IN BITUMINOUS COAL MINING IN SPECIFIED STATES, 1924 - 1933

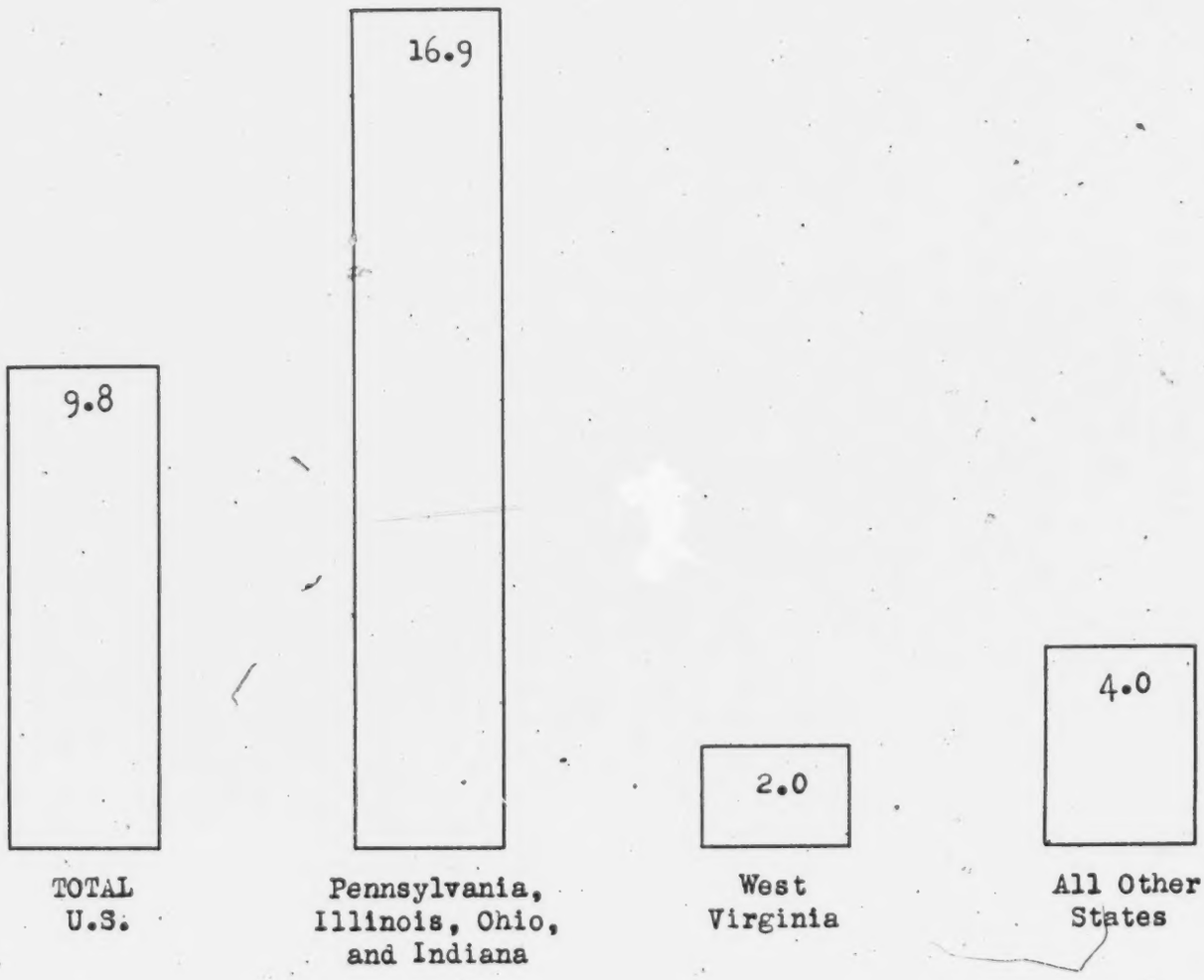


SOURCE: Compiled from reports of Bureau of Mines

960A

Plaintiff's Ex. 78-A

AVERAGE NUMBER OF DAYS IDLE ON ACCOUNT OF STRIKE PER YEAR PER MAN EMPLOYED IN BITUMINOUS COAL MINING, 1924 - 1933



SOURCE: Compiled from reports of Bureau of Mines

9606

[fol. 1009]

PLAINTIFF'S EXHIBIT 78-B

Average Number of Days Lost on Account of Strike Per Man Employed in Specified States, 1924–1933

Bituminous Coal Mining

	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	Average per year** 1924–1933
Pennsylvania, bituminous	25	1	3	*	*	5	43	2	1	2	8.4
Illinois	3	92	8	7	1	23	130	*	*	1	26.6
Indiana	4	48	1	2	4	5	96	8	4	6	19.8
Ohio	2	92	6	*	2	74	158	2	4	5	33.0
West Virginia	1	*	4	*	None	*	*	1	3	10	2.0
Total United States, bituminous coal mining	9	19	3	2	*	8	45	1	2	7	9.8

*Less than 1/2 day.

**Average per year, 1924–1933, obtained by dividing annual average of number of man-days idle by annual average of number of men employed during this ten-year period. Since the number of men employed varies by years (in Pennsylvania, for instance, the number of men employed in bituminous coal mining varied from 169,322 in 1924 to 104,532 in 1932), the averages of the figures for each individual year would differ somewhat from the annual average for the entire ten-year period.

Source: Compiled from reports of Bureau of Mines.

(Here follow Plaintiff's Exhibit 78-C and 79, folios 1010 and 1011.)

Plaintiff's Ex.78-C

Total Number of Men Employed and Man-Days Idle on Account of Strike in Bituminous Coal Mining, 1924-1933

With Separate Totals for Specified States

	Total Number of Men Employed												Man-days idle on account of strike, 1924-1933		Average no. of days idle on account of strike per man per year, 1924-1933
	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	Total 1924-1933	Annual Average 1924-1933	Total	Annual Average	
Pennsylvania (bituminous)	115,453	104,532	116,726	130,150	131,774	133,414	153,699	155,999	156,798	169,322	1,367,867	136,787	11,546,449	1,154,645	8.4
Illinois	44,145	47,597	49,685	53,603	56,725	64,266	76,970	75,870	77,823	89,363	636,047	63,605	16,911,265	1,691,126	26.6
Indiana	11,199	10,639	12,311	13,881	15,250	16,806	24,352	23,404	22,732	27,558	178,132	17,813	3,533,200	353,320	19.8
Ohio	25,442	23,280	25,085	25,574	25,399	21,371	35,543	38,547	39,658	44,229	304,128	30,413	10,028,418	1,002,842	33.0
Total of above	196,239	186,048	203,807	223,208	229,148	235,857	290,564	293,820	297,011	330,472	2,486,174	248,618	42,019,332	4,201,933	16.9
West Virginia	92,472	85,765	97,787	105,988	104,942	111,733	119,799	118,726	110,189	102,203	1,049,604	104,960	2,131,651	213,165	2.0
All other states	129,992	134,567	148,619	164,006	168,903	174,560	183,555	181,101	181,293	186,929	1,653,525	165,352	6,691,939	669,194	4.0
Total United States bituminous	418,703	406,380	450,213	493,202	502,993	522,150	593,918	593,647	588,493	619,604	5,189,303	518,930	50,842,922	5,084,292	9.8

Summary for Ten-Year Period, 1924-1933

	United States Total	Pennsylvania, Illinois, Ohio and Indiana	West Virginia	All other States
Man-days idle on account of strike, annual average	5,084,292	4,201,933	213,165	669,194
Total number of men employed, annual average	518,930	248,618	104,960	165,352
Average number of days idle on account of strike				

Illinois	44,145	47,597	49,685	53,603	56,725	64,266	76,970	75,870	77,823	89,363	636,047	63,605	16,911,265	1,691,126	26.6
Indiana	11,199	10,639	12,311	13,881	15,250	16,806	24,352	23,404	22,732	27,558	178,132	17,813	3,533,200	353,320	19.8
Ohio	25,442	23,280	25,085	25,574	25,399	21,371	35,543	38,547	39,658	44,229	304,128	30,413	10,028,418	1,002,842	33.0
Total of above	196,239	186,048	203,807	223,208	229,148	235,857	290,564	293,820	297,011	330,472	2,486,174	248,618	42,019,332	4,201,933	16.9
West Virginia	92,472	85,765	97,787	105,988	104,942	111,733	119,799	118,726	110,189	102,203	1,049,604	104,960	2,131,651	213,165	2.0
All other states	129,992	134,567	148,619	164,006	168,903	174,560	183,555	181,101	181,293	186,929	1,653,525	165,352	6,691,939	669,194	4.0
Total United States bituminous	418,703	406,380	450,213	493,202	502,993	522,150	593,918	593,647	588,493	619,604	5,189,303	518,930	50,842,922	5,084,292	9.8

Summary for Ten-Year Period, 1924-1933

	United States Total	Pennsylvania, Illinois, Ohio and Indiana	West Virginia	All other States
Man-days idle on account of strike, annual average	5,084,292	4,201,933	213,165	669,194
Total number of men employed, annual average	518,930	248,618	104,960	165,352
Average number of days idle on account of strike per year per man employed	9.8	16.9	2.0	4.0

Source: Compiled from reports of Bureau of Mines.

Source: Figures for each year were taken from tables on "Strikes, suspensions and lockouts" in annual reports on Coal of Bureau of Mines. We calculated the totals and averages. Year-by-year figures on "man-days idle on account of strike" are shown in another table on strikes which we prepared (the one comparing production with man-days idle on account of strike, by specified states).

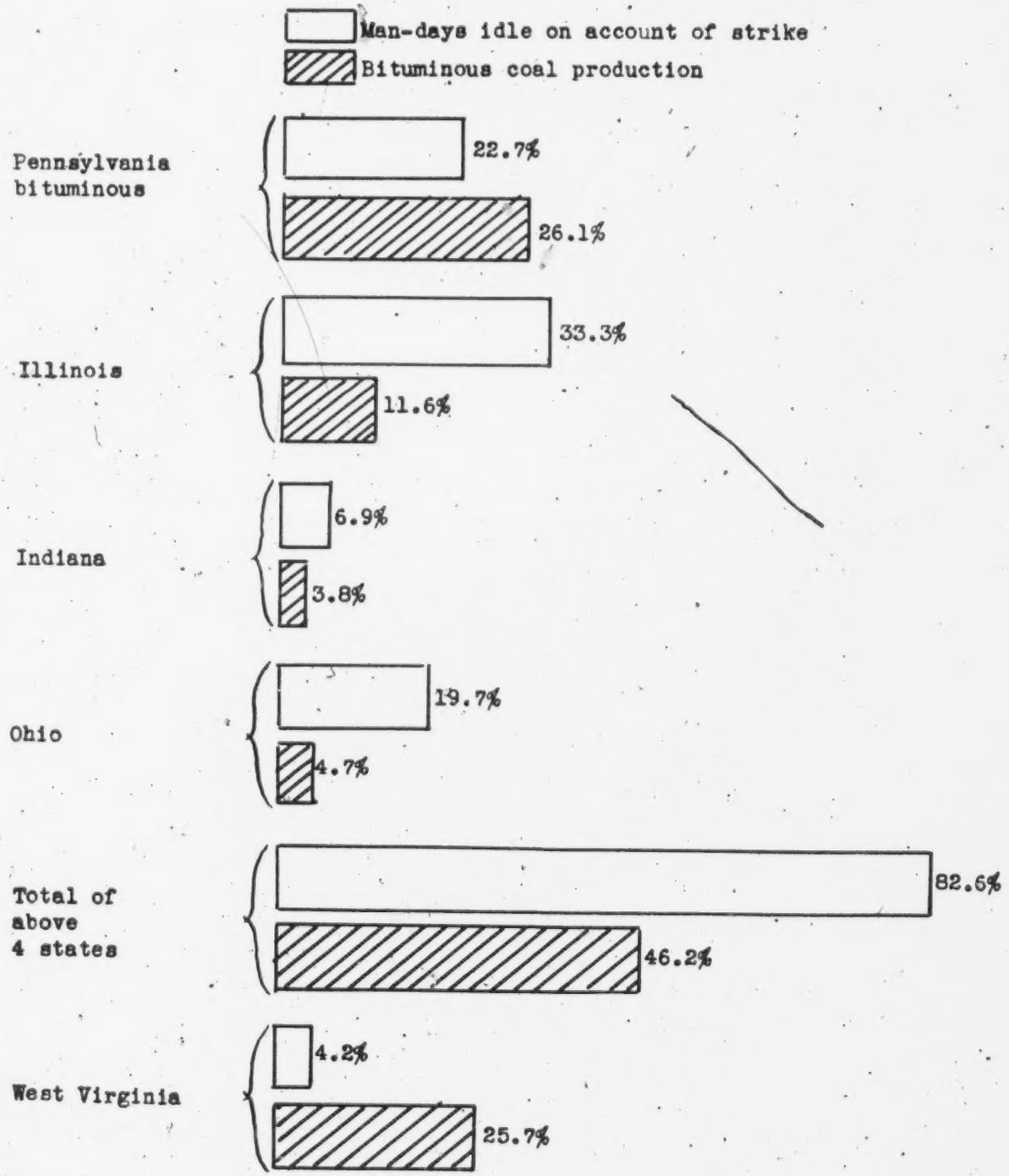
Plaintiff's Ex. 79

PER CENT OF UNITED STATES TOTAL IN EACH SPECIFIED STATE OF:

MAN-DAYS IDLE ON ACCOUNT OF STRIKE IN BITUMINOUS COAL MINING.

BITUMINOUS COAL PRODUCTION.

TEN YEAR PERIOD, 1924-1933, INCLUSIVE



Source: Compiled from data given in Bureau of Mines reports.

9296

[fol. 1011-a] PLAINTIFF'S EXHIBIT 79-A

Man-Days Idle on Account of Strike, Suspension or Lockout and Bituminous Coal Production in Each Specified State, 1924–1933

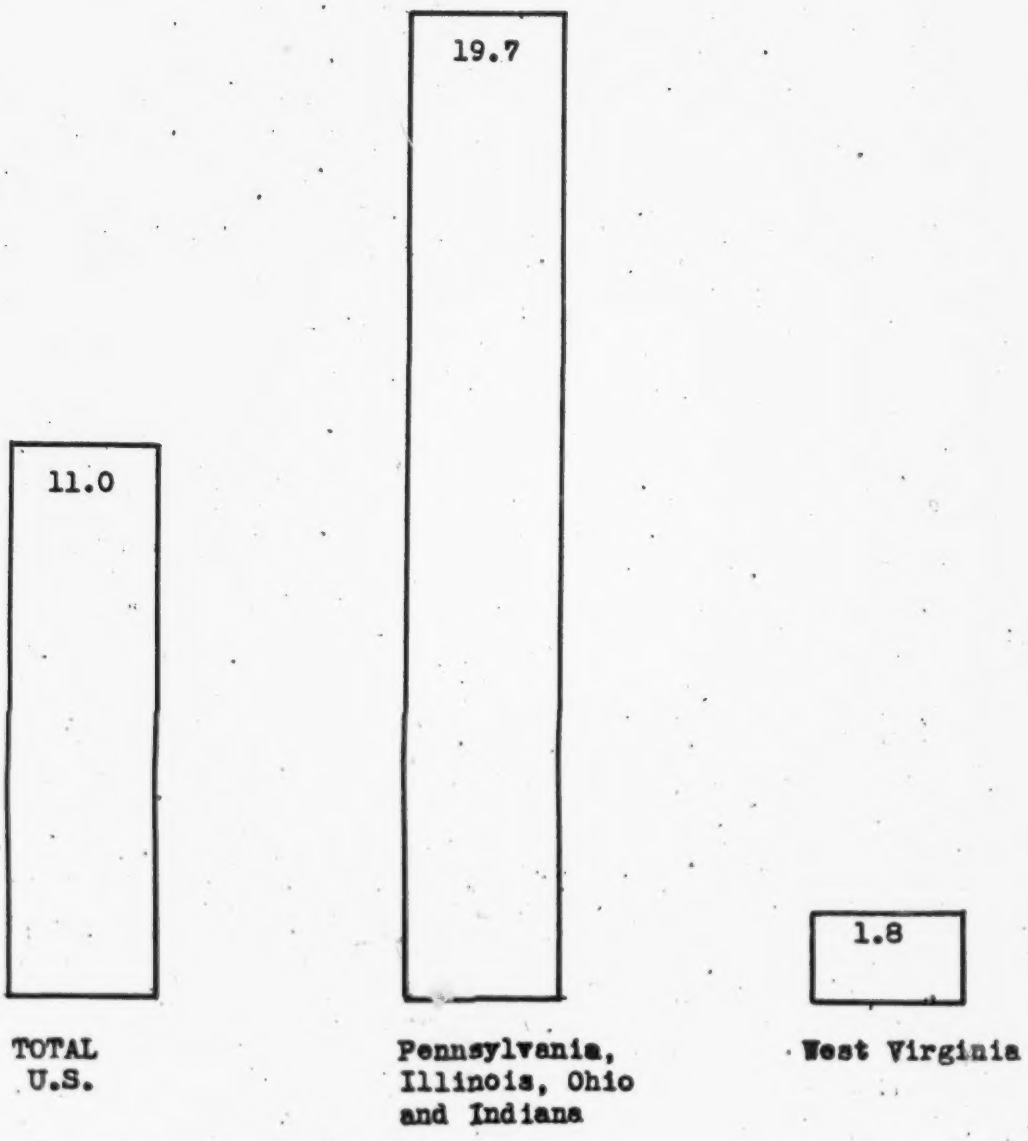
	Man-Days Idle Account of Strike		Bituminous Coal Production	
	Number	% of U. S. Total	1,000 Net Tons	% of U. S. Total
Pennsylvania, (bituminous)	11,546,449	22.7	1,204,480	26.1
Illinois	16,911,265	33.3	536,976	11.6
Indiana	3,533,200	6.9	176,420	3.8
Ohio	10,028,418	19.7	217,971	4.7
Total	42,019,332	82.6	2,136,846	46.2
West Virginia	2,131,651	4.2	1,187,245	25.7
All other states	6,691,939	13.2	1,300,468	28.1
Total United States	50,842,922	100.0	4,623,559	100.0

Source: Compiled from data given in Bureau of Mines' reports.

(Here follow Plaintiff's Exhibits 79-b and 79-c, side folios 1012 and 1013.)

Plaintiff's Ex. 79-B

MAN-DAYS LOST ON ACCOUNT OF STRIKE PER 1,000 NET TONS OF BITUMINOUS COAL PRODUCED, 1924 - 1933



SOURCE: Compiled and calculated from data given in Bureau of Mines reports

W4968

Plaintiff's Ex. 79-C

Comparison, by Specified States or Groups of States of (1) Number of Man-days Idle on Account of Strikes, Suspensions and Lockouts and (2) Bituminous Coal Production, 1924-1933

	Number of Man-days Idle on Account of Strikes, Bituminous Coal Mining										Bituminous Coal Production 1924-1933
	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1924-1933 Total	
Pennsylvania, bituminous	2,896,545	113,696	398,932	14,689	4,073	658,111	6,591,870	272,918	234,389	361,226	11,546,449	1,204,479,764
Illinois	130,197	4,397,006	397,263	348,779	68,155	1,463,409	10,018,566	12,609	25,180	50,101	16,911,265	536,975,850
Indiana	48,210	507,051	14,181	32,003	58,553	91,842	2,345,279	179,375	96,963	159,743	3,533,200	176,419,633
Ohio	45,942	2,130,292	138,155	12,583	46,165	1,576,760	5,605,443	85,118	170,208	217,752	10,028,418	217,971,193
Total of above	3,120,894	7,148,045	948,531	408,054	176,946	3,790,122	24,561,158	550,020	526,740	788,822	42,019,332	2,135,846,440
% of U. S. Total	83.7%	94.6%	60.9%	41.2%	90.3%	90.1%	92.6%	76.7%	45.3%	18.7%	82.6%	46.2%
West Virginia	50,929	44,307	393,883	13,215	-	18,650	47,514	126,242	376,399	1,060,478	2,131,651	1,187,244,737
% of U. S. Total	1.4%	.6%	25.3%	1.3%	-	.4%	.2%	17.6%	32.3%	25.1%	4.2%	25.7%
All other states	554,789	360,116	214,906	569,091	18,996	395,632	1,907,161	41,039	260,391	2,369,818	6,691,939	1,300,468,012
% of U. S. Total	14.9%	4.8%	13.8%	57.5%	9.7%	9.4%	7.2%	5.7%	22.4%	56.2%	13.2%	28.1%
Total bituminous, U. S.	3,726,612	7,552,468	1,557,320	990,360	195,942	4,204,404	26,515,867	717,301	1,163,530	4,219,118	50,842,922	4,623,559,279

Summary for Ten-Year Period, 1924-1933

Man-days lost on account of strike	United States Total	Pennsylvania, Illinois, Indiana and Ohio		West Virginia		All other states	
		Number	% of U. S. Total	Number	% of U. S. Total	Number	% of U. S. Total
	50,842,922	42,019,332	82.6%	2,131,651	4.2%	6,691,939	13.2%

hio	45,942	2,130,292	138,155	12,583	46,165	1,576,760	5,605,443	85,118	170,208	217,752	10,028,418	217,971,193
Total of above	3,120,894	7,148,045	948,531	408,054	176,946	3,790,122	24,561,158	550,020	526,740	788,822	42,019,332	2,135,846,440
% of U. S. Total	83.7%	94.6%	60.9%	41.2%	90.3%	90.1%	92.6%	76.7%	45.3%	18.7%	82.6%	46.2%
est Virginia	50,929	44,307	393,883	13,215	-	18,650	47,548	126,242	376,399	1,060,478	2,131,651	1,187,244,737
% of U. S. Total	1.4%	.6%	25.3%	1.3%	-	.4%	.2%	17.6%	32.3%	25.1%	4.2%	25.7%
ll other states	554,789	360,116	214,906	569,091	18,996	395,632	1,907,161	41,039	260,391	2,369,818	6,691,939	1,300,468,012
% of U. S. Total	14.9%	4.8%	13.8%	57.5%	9.7%	9.4%	7.2%	5.7%	22.4%	56.2%	13.2%	28.1%
tal bituminous, U. S.	3,726,612	7,552,468	1,557,320	990,360	195,942	4,204,404	26,515,867	717,301	1,163,530	4,219,118	50,842,922	4,623,559,279

Summary for Ten-Year Period, 1924-1933

	United States Total	Pennsylvania, Illinois, Indiana and Ohio		West Virginia		All other states	
		Number	% of U. S. Total	Number	% of U. S. Total	Number	% of U. S. Total
Man-days lost on account of strike	50,842,922	42,019,332	82.6%	2,131,651	4.2%	6,691,939	13.2%
Bituminous coal production, net tons	4,623,559,279	2,135,846,440	46.2%	1,187,244,737	25.7%	1,300,468,012	28.1%
Man-days lost per thousand net tons mined	11.0	19.7	-	1.8	-	5.1	-

Source: Compiled and calculated from data given in Bureau of Mines' reports.

Source: Figures for each year on man-days idle on account of strike were taken from tables on "Strikes, Suspensions and Lockouts" in annual reports on coal of Bureau of Mines. We calculated the totals and man-days lost per 1,000 net tons mined.

fol. 1014] PLAINTIFF'S EXHIBIT 80

Strikes, Suspensions, and Lockouts in Bituminous Coal Mining Industry, 1915–1933

	Total No. of men employed	No. of men on strike	Man-days idle on acc't of strike	Average No. of days lost on acc't of strike	
				Per man employed	Per man on strike
1915	*	36,865	2,252,740	*	61
1916	*	91,152	2,389,519	*	26
1917	*	126,020	2,187,244	*	17
1918	*	60,105	438,882	*	7
1919	*	418,279	15,525,857	*	37
1920	*	185,579	4,099,157	*	22
1921	*	99,146	2,282,824	*	23
1922	687,958	460,589	53,874,017	78	117
1923	704,793	61,629	1,239,125	2	20
1924	619,604	58,179	4,219,118	7	73
1925	588,493	38,441	1,163,530	2	30
1926	593,647	29,348	717,301	1	24
1927	593,918	172,844	26,515,867	45	153
1928	522,150	50,742	4,204,404	8	83
1929	502,993	18,275	195,942	**	11
1930	493,202	22,798	990,360	2	43
1931	450,213	44,658	1,557,320	3	35
1932	406,380	62,867	7,552,468	19	120
1933	418,703	125,503	3,726,612	9	30

*Not reported in tables on "Strikes, Suspensions and Lockouts" for these years.
**Less than 1/2.

Source: Bureau of Mines.

(Here follow Plaintiff's Exhibits 80-a and 81, tabulation and map, side folios 1015 and 1016.)

STRIKES, SUSPENSIONS AND LOCKOUTS IN COAL MINES, BY STATES, 1921-1933

Plaintiff's Ex. 80-A

State	1921 Total number of men employed	1921 Number of men on strike	1921 Average number of days lost per man employed	1922 Total number of men employed	1922 Number of men on strike	1922 Average number of days lost per man employed	1923 Total number of men employed	1923 Number of men on strike	1923 Average number of days lost per man employed	1924 Total number of men employed	1924 Number of men on strike	1924 Average number of days lost per man employed	1925 Total number of men employed	1925 Number of men on strike	1925 Average number of days lost per man employed	1926 Total number of men employed	1926 Number of men on strike	1926 Average number of days lost per man employed	1927 Total number of men employed	1927 Number of men on strike	1927 Average number of days lost per man employed
Alabama	25,809	2,329	6	28,169	46	*	30,035	--	--	27,956	--	--	27,097	--	--	27,345	--	--	27,615	--	--
Arkansas	3,616	1,677	5	4,035	3,691	108	3,754	324	2	3,350	1,076	9	3,638	560	12	3,589	205	*	3,706	389	11
Colorado	14,529	2,497	5	13,506	6,672	39	13,340	--	--	12,954	120	*	13,203	595	*	12,815	--	--	11,999	5,429	22
Illinois	95,431	18,088	2	96,336	93,584	120	99,714	7,474	1	89,363	4,217	1	77,823	4,870	*	75,870	987	*	76,970	66,992	130
Indiana	32,687	17,634	10	33,208	31,721	118	35,408	10,765	3	27,558	7,699	6	22,732	7,919	4	23,401	10,450	8	24,352	17,303	96
Iowa	11,386	897	*	12,837	12,192	115	11,448	1,946	2	12,101	986	1	10,167	1,267	*	8,869	932	2	8,741	5,624	93
Kansas	8,207	7,285	66	7,359	6,515	115	9,761	949	3	8,561	2,706	14	7,800	530	1	8,172	118	*	7,004	3,014	56
Kentucky	50,521	1,789	1	60,924	10,270	10	60,811	2,699	2	55,766	8,938	31	57,024	1,954	3	60,578	688	*	64,747	1,824	*
Maryland	4,668	123	1	3,755	4,446	183	3,725	2,686	97	3,776	168	*	3,580	--	--	3,681	603	1	3,459	--	--
Michigan	2,212	780	1	2,166	2,062	114	1,977	786	2	1,551	425	1	1,579	725	4	1,573	225	*	1,512	470	1
Missouri	8,555	2,089	6	8,750	7,535	107	6,952	312	2	5,977	1,580	13	5,114	110	*	5,270	64	*	6,232	2,662	54
Montana	4,178	92	*	3,635	3,361	118	3,511	25	*	3,196	17	*	2,680	--	--	2,419	225	*	2,281	--	--
New Mexico	4,577	425	*	4,001	585	19	4,095	--	--	4,206	--	--	3,444	--	--	3,167	--	--	3,456	--	--
North Dakota	1,064	15	*	1,648	578	30	1,621	85	4	1,298	--	--	1,307	--	--	1,288	--	--	1,341	--	--
Ohio	51,785	17,682	3	54,194	46,283	102	54,555	16,486	4	44,229	10,256	5	39,658	6,572	4	38,547	6,857	2	35,543	26,250	158
Oklahoma	8,854	1,520	1	7,828	5,872	99	7,130	1,020	1	6,144	1,318	24	5,631	352	3	5,400	20	*	5,796	163	4
Pennsylvania, bituminous	190,643	14,895	2	188,838	155,604	97	194,981	10,984	1	169,322	8,793	2	156,798	7,414	1	155,999	4,922	2	153,699	41,692	43
Tennessee	10,347	638	2	11,449	5,864	42	11,244	572	2	9,365	2,134	26	8,314	250	*	7,948	300	*	7,691	50	*
Texas	--	--	--	2,841	693	5	2,452	137	7	2,195	--	--	2,108	87	*	1,650	--	--	1,674	--	--
Utah	4,422	100	*	4,721	2,111	45	4,381	--	--	4,330	58	*	4,441	280	2	3,545	--	--	3,339	--	--
Virginia	--	--	--	13,399	240	*	14,120	--	--	12,679	--	--	13,677	--	--	13,764	--	--	13,211	--	--
Washington	4,334	802	3	4,481	2,225	67	4,306	1,754	12	3,858	--	--	3,726	--	--	3,609	--	--	3,407	--	--
West Virginia	101,850	7,198	2	110,014	49,832	49	117,300	2,625	*	102,203	7,688	10	110,189	4,956	3	118,726	2,692	1	119,799	982	*
Wyoming	8,484	591	*	9,045	8,607	117	7,529	--	--	7,113	--	--	6,238	--	--	5,862	--	--	5,791	--	--
Other States	--	--	--	--	--	--	643	--	--	553	--	--	525	--	--	557	60	*	553	--	--
Total bituminous	648,159	99,146	4	687,159	460,589	78	704,793	61,629	2	619,604	58,179	7	588,493	38,441	2	593,647	29,348	1	593,918	172,844	45
Pennsylvania anthracite	159,499	52,117	5	156,849	142,442	125	157,743	135,585	17	160,009	71,273	7	160,312	147,928	95	165,386	145,376	36	165,259	20,478	1
Grand Total	807,658	151,263	4	844,008	603,031	87	862,536	19[illegible]214	4	779,613	129,452	7	748,805	186,369	22	759,033	174,724	9	759,177	193,322	35

State	1928 Total number of men employed	1928 Number of men on strike	1928 Average number of days lost per man employed	1929 Total number of men employed	1929 Number of men on strike	1929 Average number of days lost per man employed	1930 Total number of men employed	1930 Number of men on strike	1930 Average number of days lost per man employed	1931 Total number of men employed	1931 Number of men on strike	1931 Average number of days lost per man employed	1932 Total number of men employed	1932 Number of men on strike	1932 Average number of days lost per man employed	1933 Total number of men employed	1933 Number of men on strike	1933 Average number of days lost per man employed
Alabama	25,708	--	--	25,208	--	--	24,333	--	--	22,973	--	--	20,443	--	--	18,237	1,200	1
Arkansas	4,092	--	--	4,299	95	*	4,628	--	--	4,733	860	4	4,325	1,964	24	3,671	1,225	2
Colorado	12,366	1,594	5	12,057	--	--	11,091	--	--	10,028	--	--	8,749	--	--	7,908	605	1
Illinois	64,266	21,815	23	56,725	10,162	1	53,603	9,483	7	49,685	9,400	8	47,597	32,961	92	44,145	3,187	3
Indiana	16,806	3,216	5	15,250	3,851	4	13,881	2,008	2	12,311	883	1	10,639	3,820	48	11,199	3,151	4
Iowa	6,965	1,986	10	7,295	810	*	7,901	591	*	7,897	824	3	8,086	389	1	7,695	4,462	24
Kansas	5,991	1,525	28	5,139	106	1	4,855	--	--	3,813	38	*	3,591	58	*	3,809	18	*
Kentucky	62,195	1,130	*	58,649	561	*	56,674	6,436	10	47,766	2,920	1	42,267	721	1	43,717	5,302	2
Maryland	3,304	--	--	3,289	--	--	3,299	--	--	3,224	--	--	3,105	67	*	2,880	40	*
Michigan	1,239	430	5	1,336	762	3	1,294	630	2	1,372	597	19	940	--	--	1,186	562	53
Missouri	5,964	941	11	5,618	211	*	5,700	50	*	5,362	679	6	5,677	301	9	5,690	463	1
Montana	2,191	1,219	4	2,283	--	--	2,085	--	--	1,672	--	--	1,525	748	18	1,324	--	--
New Mexico	3,441	--	--	3,233	--	--	2,902	--	--	2,830	--	--	2,602	--	--	2,340	693	12
North Dakota	1,335	--	--	1,421	--	--	1,258	--	--	1,300	--	--	1,311	--	--	1,301	--	--
Ohio	21,371	9,222	74	25,399	943	2	25,574	1,143	*	25,085	5,591	6	23,280	15,290	92	25,442	3,647	2
Oklahoma	6,218	--	--	6,321	--	--	5,424	--	--	4,634	501	4	3,063	970	15	2,974	219	*
Pennsylvania, bituminous	133,414	5,999	5	131,774	313	*	130,150	924	*	116,726	12,783	3	104,532	2,021	1	115,453	86,832	25
[illegible]	[illegible]	[illegible]	*	[illegible]	200	*	7,535	--	--	7,448	1,133	4	7,525	550	5	7,051	375	1
[illegible]	[illegible]	--	--	[illegible]	--	--	[illegible]	--	--	[illegible]	--	--	[illegible]	--	--	[illegible]	--	--

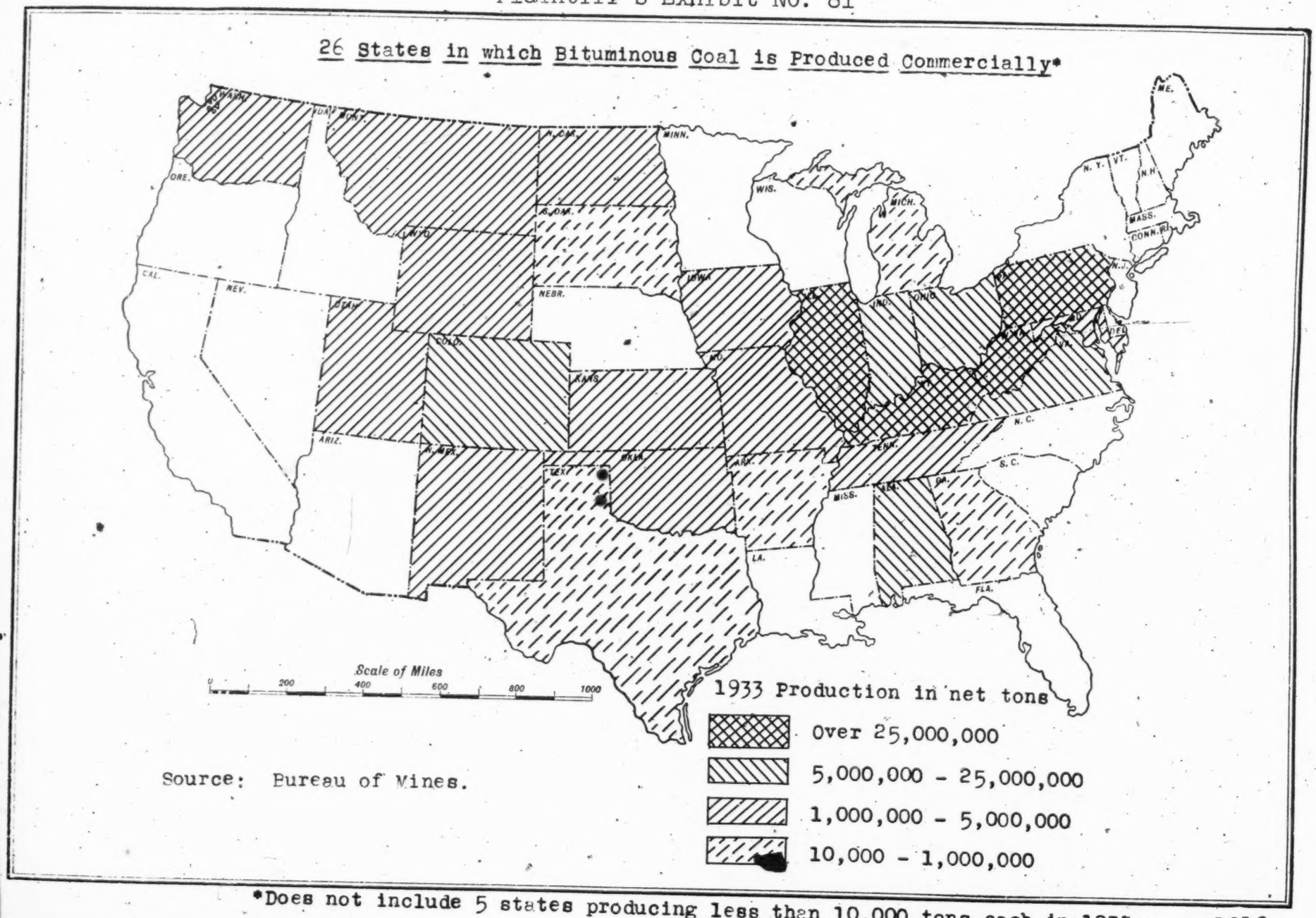
[illegible]	8,955	2,669	8	8,750	7,535	107	8,952	312	2	5,977	1,580	13	5,114	110	*	5,270	64	*	6,232	2,662	54
Montana	4,178	92	*	3,635	3,361	118	3,511	25	*	3,196	17	*	2,680	--	--	2,419	225	*	2,281	--	--
New Mexico	4,577	425	*	4,001	585	19	4,095	--	--	4,206	--	--	3,444	--	--	3,167	--	--	3,456	--	--
North Dakota	1,064	15	*	1,648	578	30	1,621	85	4	1,298	--	--	1,307	--	--	1,288	--	--	1,341	--	--
Ohio	51,785	17,682	3	54,194	46,283	102	54,555	16,486	4	44,229	10,256	5	39,658	6,572	4	38,547	6,897	2	35,543	26,250	158
Oklahoma	8,854	1,520	1	7,828	5,872	99	7,130	1,020	1	6,144	1,318	24	5,631	352	3	5,400	20	*	5,796	163	4
Pennsylvania, bituminous	190,643	14,895	2	188,838	155,604	97	194,981	10,984	1	169,322	8,793	2	156,798	7,414	1	155,999	4,922	2	153,699	41,692	43
Tennessee	10,347	638	2	11,449	5,864	42	11,244	572	2	9,365	2,134	26	8,314	250	*	7,948	300	*	7,691	50	*
Texas	--	--	--	2,841	693	5	2,452	137	7	2,195	--	--	2,108	87	*	1,650	--	--	1,674	--	--
Utah	4,422	100	*	4,721	2,111	45	4,381	--	--	4,330	58	*	4,441	280	2	3,545	--	--	3,339	--	--
Virginia	--	--	--	13,399	240	*	14,120	--	--	12,879	--	--	13,677	--	--	13,764	--	--	13,211	--	--
Washington	4,334	802	32	4,481	2,225	67	4,306	1,754	12	3,858	--	--	3,726	--	--	3,609	--	--	3,407	--	--
West Virginia	101,850	7,198	2	110,014	49,832	49	117,300	2,625	*	102,203	7,688	10	110,189	4,956	3	118,726	2,692	1	119,799	982	*
Wyoming	8,484	591	*	9,045	8,607	117	7,529	--	--	7,113	--	--	6,238	--	--	5,862	--	--	5,791	--	--
Other States	--	--	--	--	--	--	643	--	--	593	--	--	525	--	--	557	60	*	553	--	--
Total bituminous	648,159	99,146	4	687,159	460,589	78	704,793	61,629	2	619,604	58,179	7	588,493	38,441	2	593,647	29,348	1	593,918	172,844	45
Pennsylvania anthracite	159,499	52,117	5	156,849	142,442	125	157,743	135,585	17	160,009	71,273	7	160,312	147,928	95	165,386	145,376	36	165,259	20,478	1
Grand Total	807,658	151,263	4	844,008	603,031	87	862,536	197,214	4	779,613	129,452	7	748,805	186,369	22	759,033	174,724	9	759,177	193,322	35

	1928			1929			1930			1931			1932			1933		
Alabama	25,708	--	--	25,208	--	--	24,393	--	--	22,973	--	--	20,443	--	--	18,237	1,200	1
Arkansas	4,092	--	--	4,299	95	*	4,626	--	--	4,733	860	4	4,325	1,964	24	3,671	1,225	2
Colorado	12,366	1,594	5	12,057	--	--	11,091	--	--	10,028	--	--	8,749	--	--	7,908	605	1
Illinois	64,266	21,815	23	56,725	10,162	1	53,603	9,483	7	49,685	9,400	8	47,597	32,961	92	44,145	3,187	3
Indiana	16,806	3,216	5	15,250	3,851	4	13,881	2,008	2	12,311	883	1	10,639	3,820	48	11,199	3,151	4
Iowa	6,965	1,986	10	7,295	810	*	7,901	591	*	7,897	824	3	8,086	389	1	7,695	4,462	24
Kansas	5,991	1,525	28	5,139	106	1	4,855	--	--	3,813	38	*	3,591	58	*	3,809	18	*
Kentucky	62,195	1,130	*	58,649	561	*	56,674	6,436	10	47,766	2,920	1	42,267	721	1	43,717	5,302	2
Maryland	3,304	--	--	3,289	--	--	3,299	--	--	3,224	--	--	3,105	67	*	2,880	40	*
Michigan	1,239	430	5	1,336	762	3	1,294	630	2	1,372	597	19	940	--	--	1,186	562	53
Missouri	5,964	941	11	5,618	211	*	5,700	50	*	5,362	679	6	5,677	301	9	5,690	463	1
Montana	2,191	1,219	4	2,283	--	--	2,085	--	--	1,672	--	--	1,525	748	18	1,324	--	--
New Mexico	3,441	--	--	3,233	--	--	2,902	--	--	2,830	--	--	2,602	--	--	2,340	693	12
North Dakota	1,335	--	--	1,421	--	--	1,258	--	--	1,300	--	--	1,311	--	--	1,301	--	--
Ohio	21,371	9,222	74	25,399	943	2	25,574	1,143	*	25,085	5,591	6	23,280	15,290	92	25,442	3,647	2
Oklahoma	6,218	--	--	6,321	--	--	5,424	--	--	4,634	501	4	3,063	970	15	2,974	219	*
Pennsylvania, bituminous	133,414	5,999	5	131,774	313	*	130,150	924	*	116,726	12,783	3	104,532	2,021	1	115,453	86,832	25
Tennessee	7,849	265	*	7,619	200	*	7,535	--	--	7,448	1,133	4	7,525	550	5	7,051	375	1
Texas	1,462	--	--	1,313	--	--	1,305	--	--	1,148	--	--	699	--	--	803	--	--
Utah	3,352	--	--	3,458	--	--	3,504	--	--	3,268	--	--	2,842	--	--	2,906	653	3
Virginia	12,312	--	--	12,053	110	*	11,709	--	--	11,357	--	--	10,376	140	*	9,761	3,226	6
Washington	3,099	--	--	2,946	--	--	2,801	--	--	2,662	--	--	2,816	958	15	2,555	894	34
West Virginia	111,733	210	*	104,942	--	--	105,988	1,523	*	97,787	8,441	4	85,765	1,510	--	92,472	8,723	1
Wyoming	4,843	1,190	1	4,839	151	*	5,216	10	*	4,759	8	*	4,173	399	4	3,753	26	*
Other States	634	--	--	527	--	--	434	--	--	373	--	--	452	--	--	431	--	--
Total bituminous	522,150	50,742	8	502,993	18,275	*	493,202	22,798	2	450,213	44,658	3	406,380	62,867	19	418,703	125,503	9
Pennsylvania anthracite	160,681	36,128	2	151,501	39,777	2	150,804	18,202	1	139,431	65,907	4	121,243	34,259	2	104,633	50,948	7
Grand Total	682,831	86,870	7	654,494	58,052	1	644,006	41,000	2	589,644	110,565	4	527,623	97,126	15	523,336	176,451	8

* One-half day or less.

SOURCE: Bureau of Mines.

Plaintiff's Exhibit No. 81



Source: Bureau of Mines.

*Does not include 5 states producing less than 10,000 tons each in 1933

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[fol. 1017] PLAINTIFF'S EXHIBIT 81-A

Bituminous Coal Production, by States, 1933

	Net tons
Alabama	8,759,989
Alaska	96,467
Arizona	10,345
Arkansas	882,924
California, Idaho and Oregon	7,492
Colorado	5,229,767
Georgia	41,382
Illinois	37,413,145
Indiana	13,761,052
Iowa	3,194,983
Kansas	2,217,622
Kentucky	36,099,729
Maryland	1,530,748
Michigan	406,584
Missouri	3,432,212
Montana	2,152,207
New Mexico	1,226,236
North Carolina	2,014
North Dakota	1,782,272
Ohio	19,588,763
Oklahoma	1,238,244
Pennsylvania, bituminous	79,295,944
South Dakota	59,375
Tennessee	3,774,761
Texas	821,878
Utah	2,674,986
Virginia	8,178,642
Washington	1,394,068
West Virginia	94,343,535
Wyoming	4,013,167
Total bituminous	333,630,533

Source: Bureau of Mines.

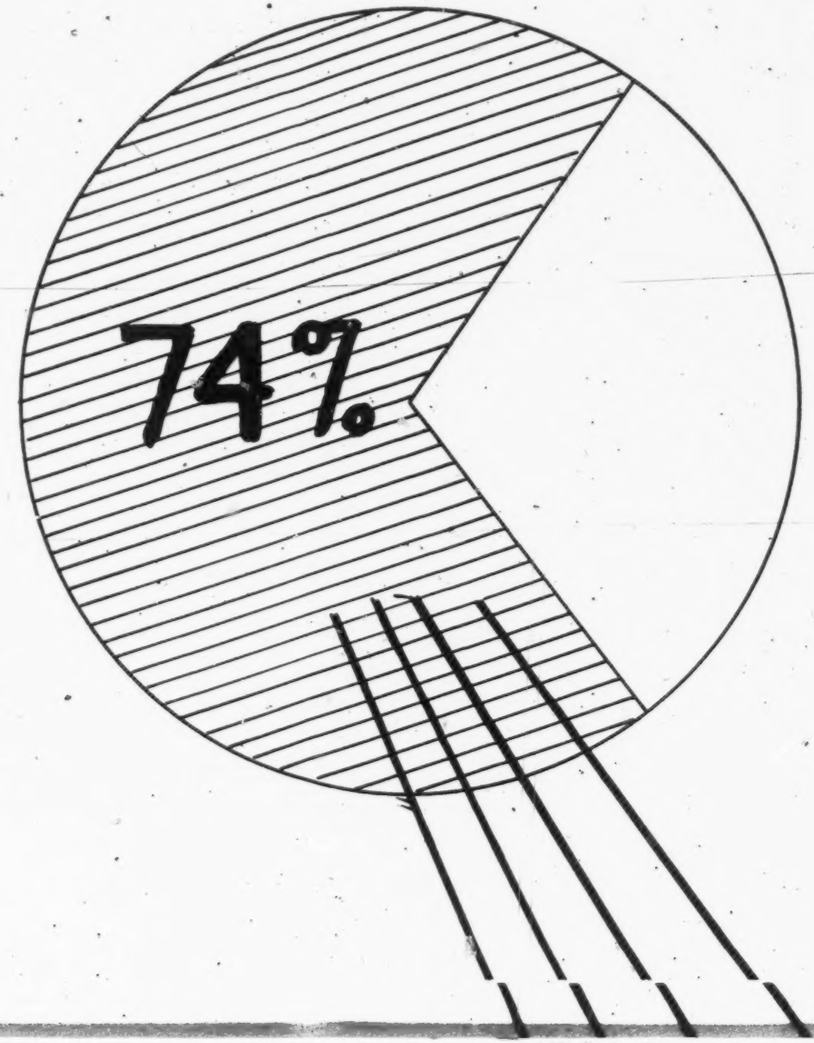
Table 3, page 286 of "Coal," Statistical Supplement to Minerals Yearbook, 1934.

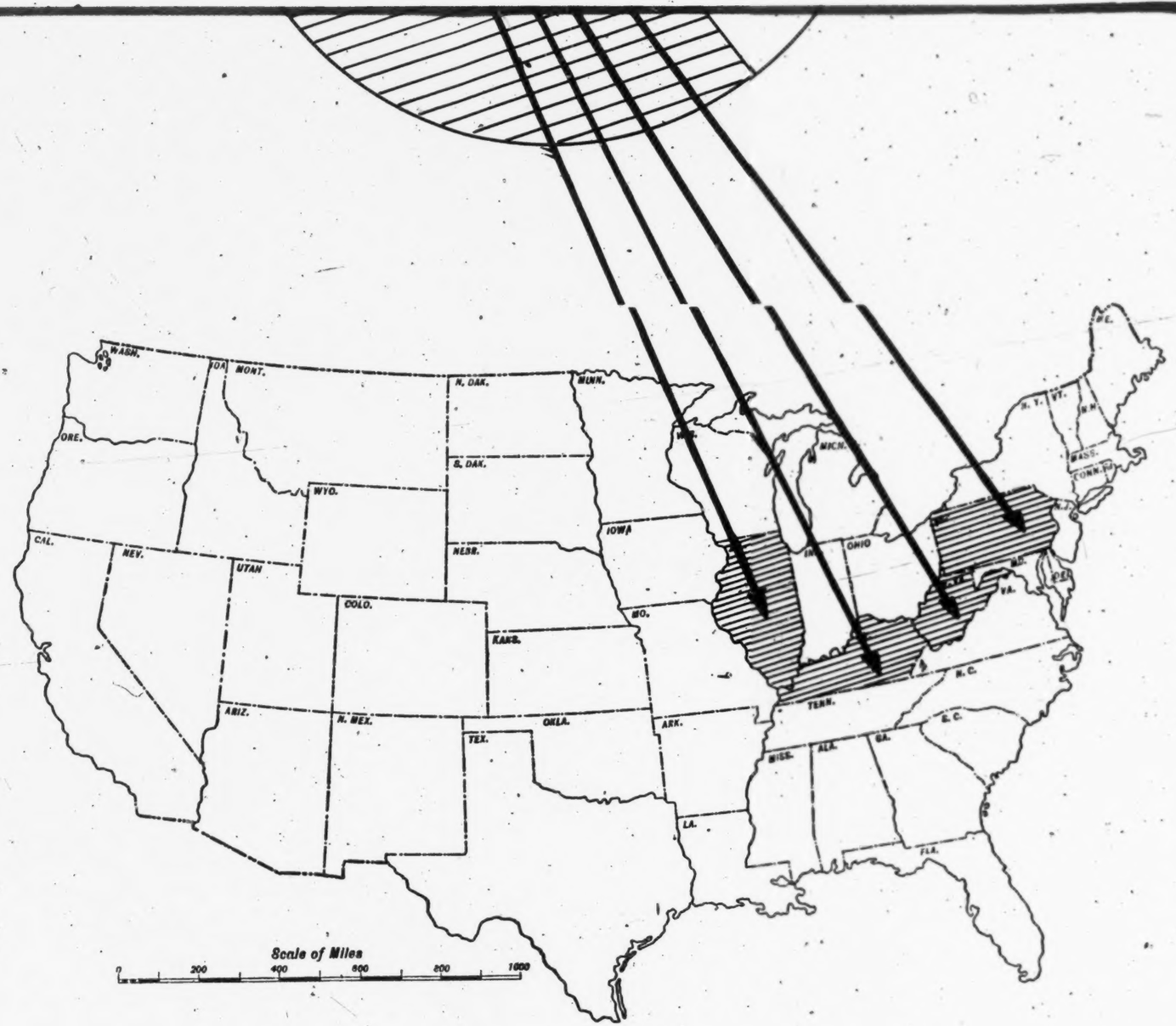
(Here follow Pltff's Exhibits 81-B and 81-C, 2 maps, side folios 1018 and 1019.)

% OF BITUMINOUS COAL

PRODUCED WITHIN 4 STATES

Plaintiff's Ex. 81-B

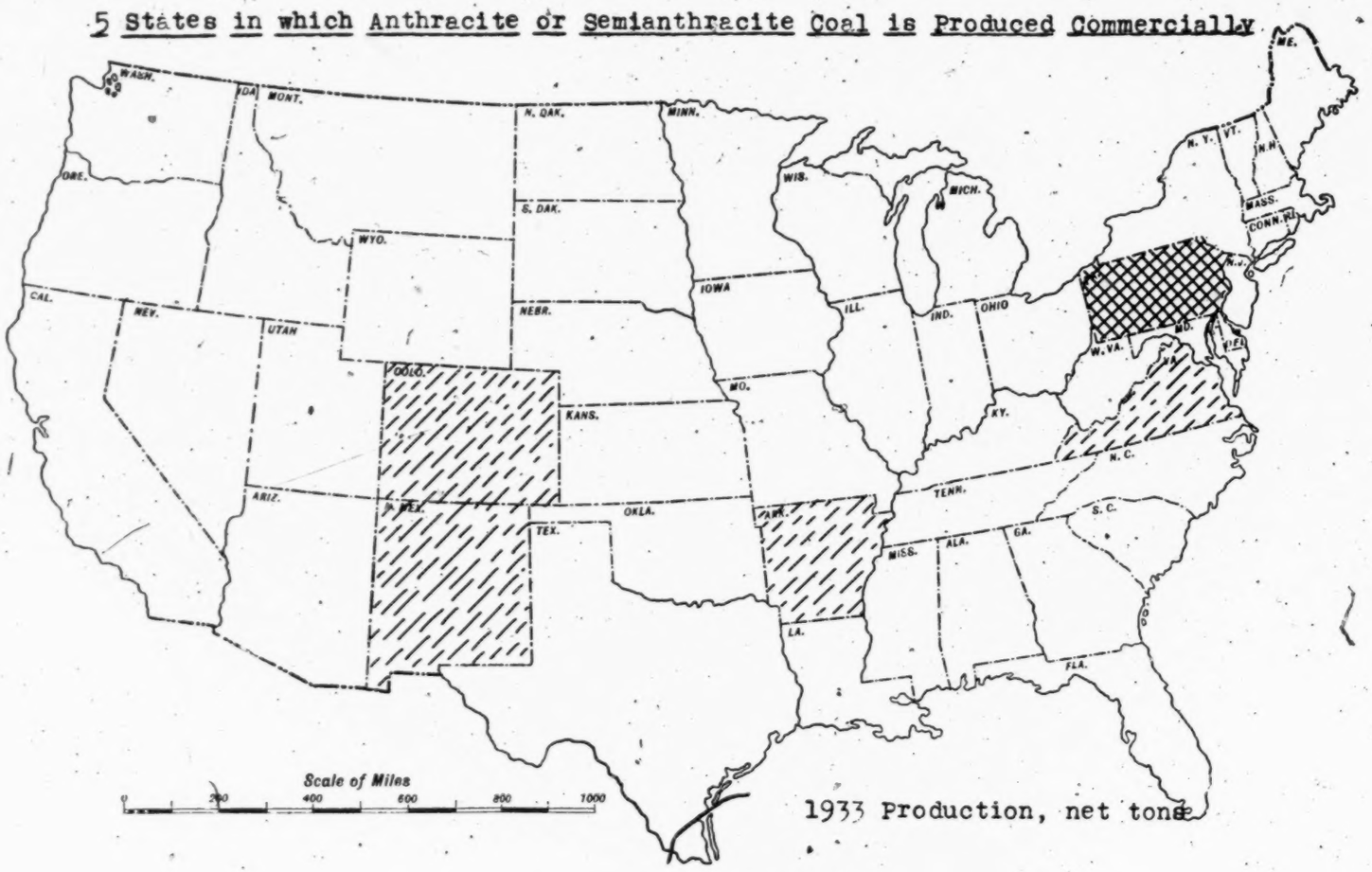




SOURCE: Compiled from Bureau of Mines reports.

Plaintiff's Exhibit No. 81-C

5 States in which Anthracite or Semianthracite Coal is Produced Commercially



Source: Bureau of Mines.

[fol. 1020] PLAINTIFF'S EXHIBIT 81-D

Production of Anthracite and Semianthracite Coal by States, 1933

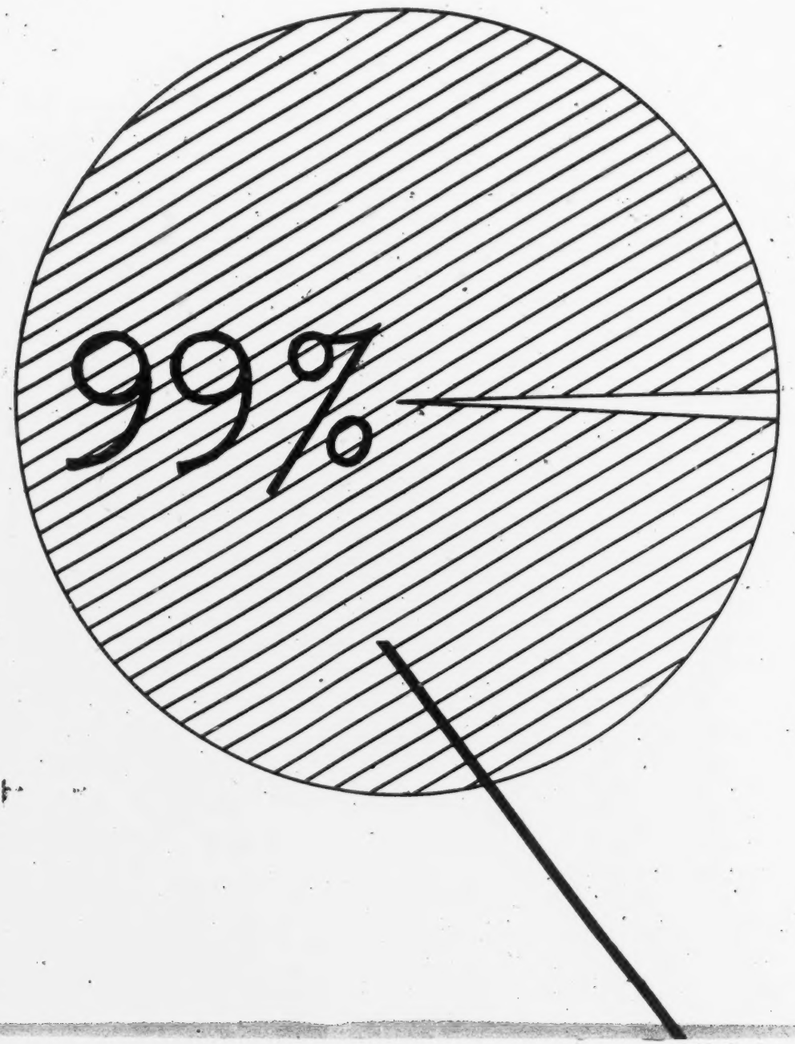
Pennsylvania	49,541,344
Virginia	165,284
Arkansas, Colorado, and New Mexico	184,784
Total	49,891,412

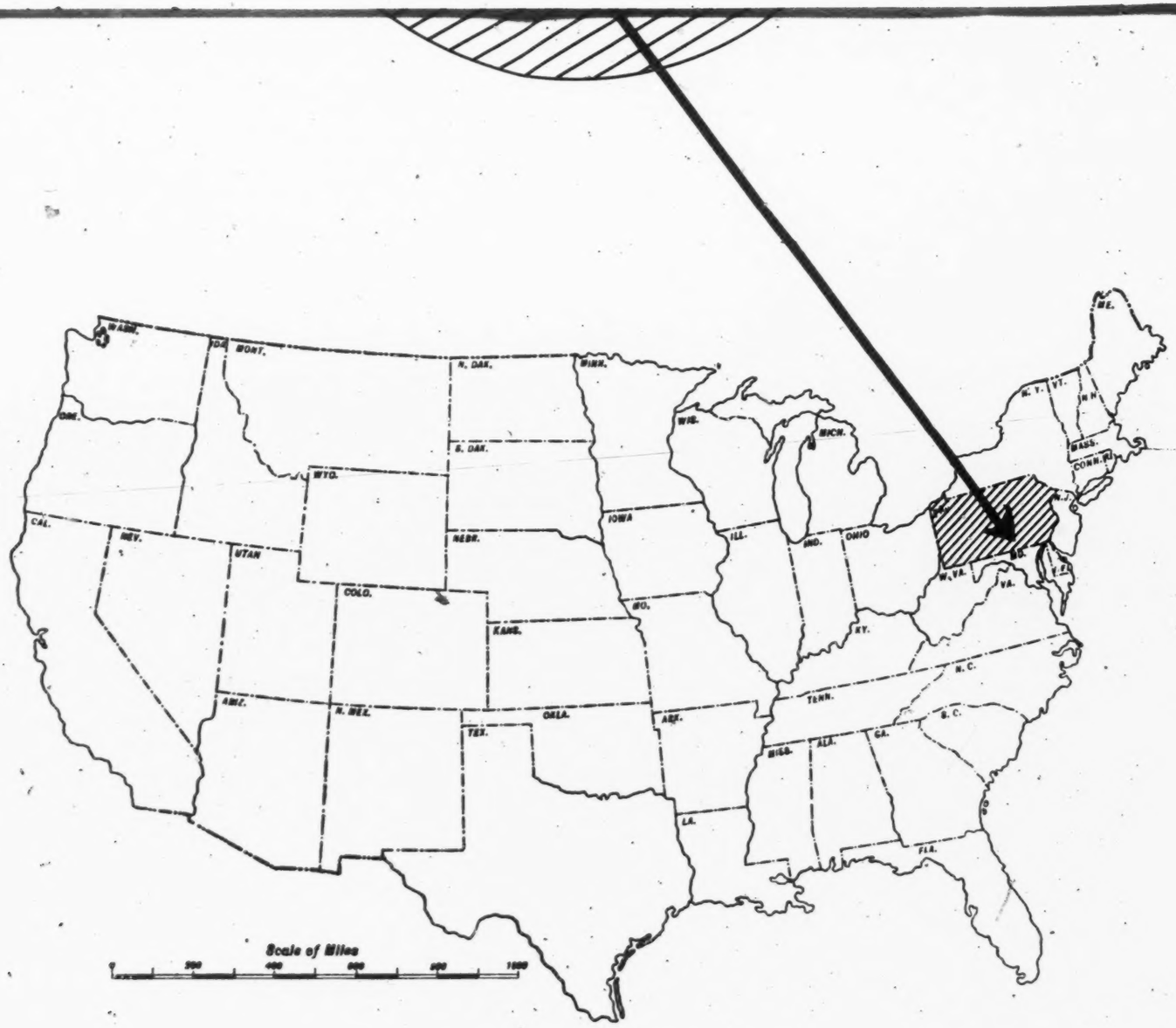
Source: Bureau of Mines.

(Here follow two maps, Pltff's Exhibits 81-E and 81-F, side folios 1021 and 1022.)

Plaintiff's Ex. 81-E

% of Anthracite and Semianthracite Coal
Produced Within One State, 1933



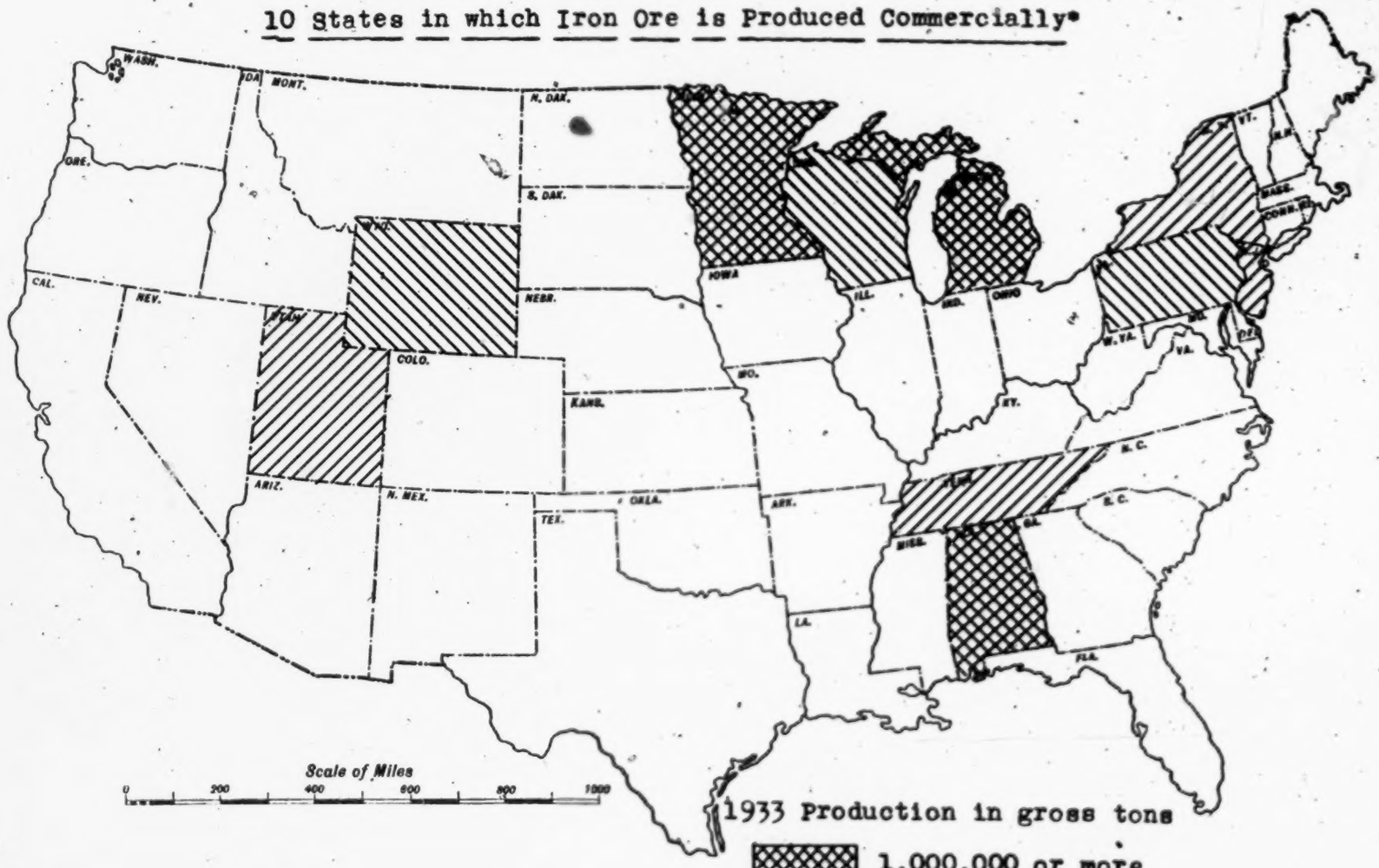


SOURCE: Compiled from Bureau of Mines reports

MADE BY [redacted] U. S. A.
FORM 86513

Plaintiff's Ex. 81-F

10 States in which Iron Ore is Produced Commercially*



Source: Bureau of Mines.

*Five States producing 25 to 1,631 tons each not shown

[fol. 1023] PL'FF'S EX. 81-G

Iron Ore Mined in the United States in 1933

By States

In Gross tons

(Exclusive of ore containing 5 per cent or more manganese)

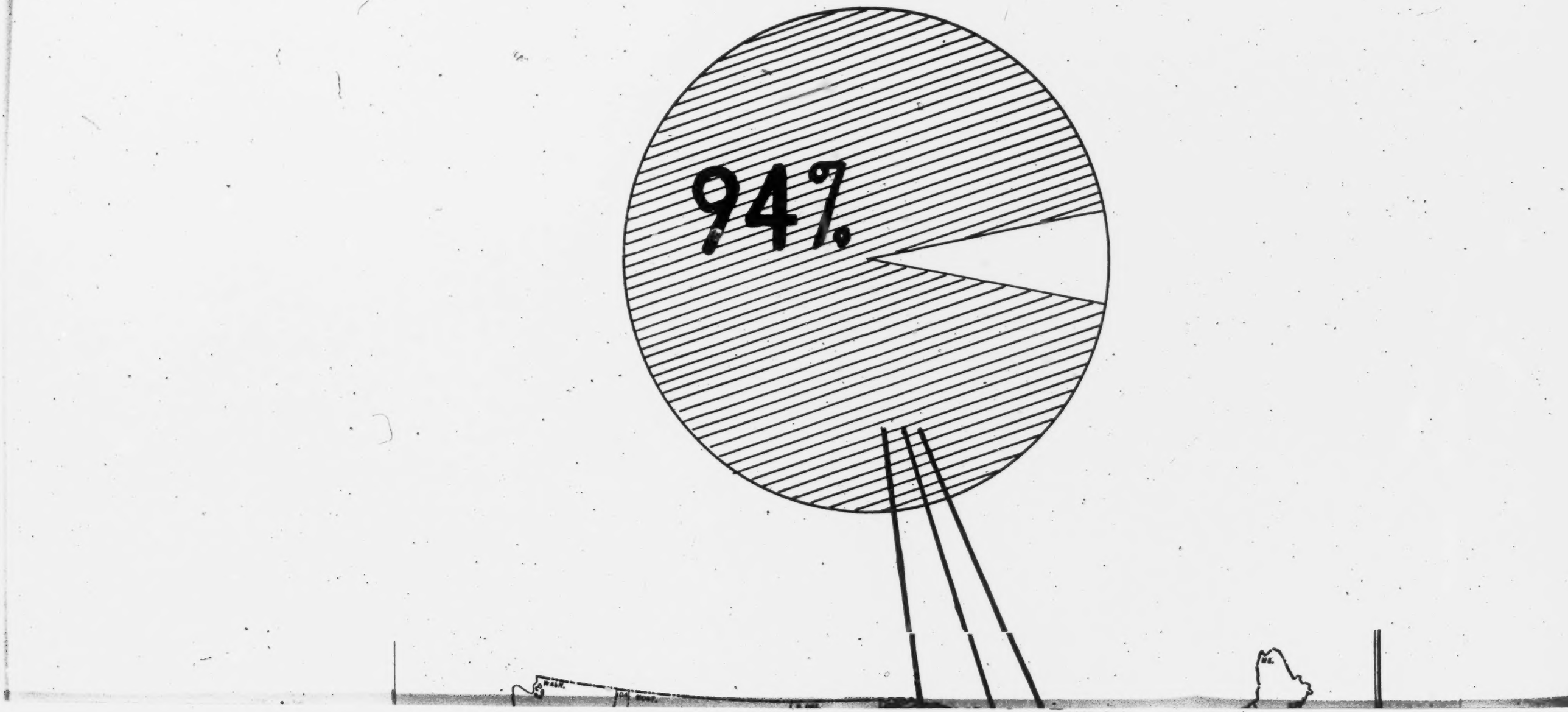
Alabama	2,133,457
California	25
Georgia	1,302
Michigan	2,433,949
Minnesota	11,948,596
Missouri	395
New Jersey	73,144
New York	58,718
Pennsylvania	264,366
Tennessee	24,912
Utah	95,279
Virginia	287
Washington	1,631
Wisconsin	228,487
Wyoming	288,640
Total, 1933	17,553,188

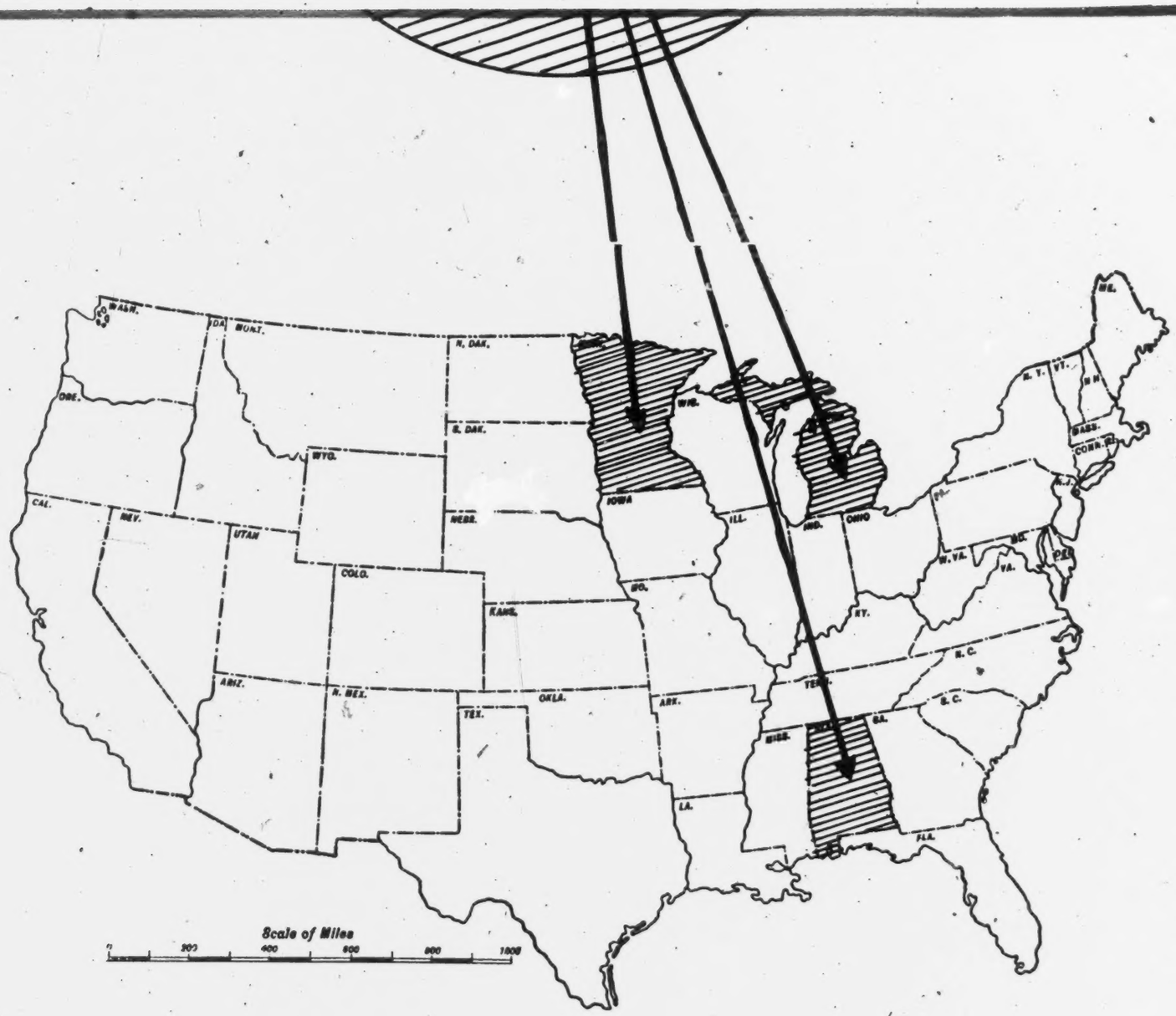
Source: Bureau of Mines.

(Here follow 2 maps, Pltff's Exhibits 81-H and 81-I, side folios 1024 and 1025.)

Plaintiff's Ex. 81-H

% OF IRON ORE PRODUCED
WITHIN 3 STATES



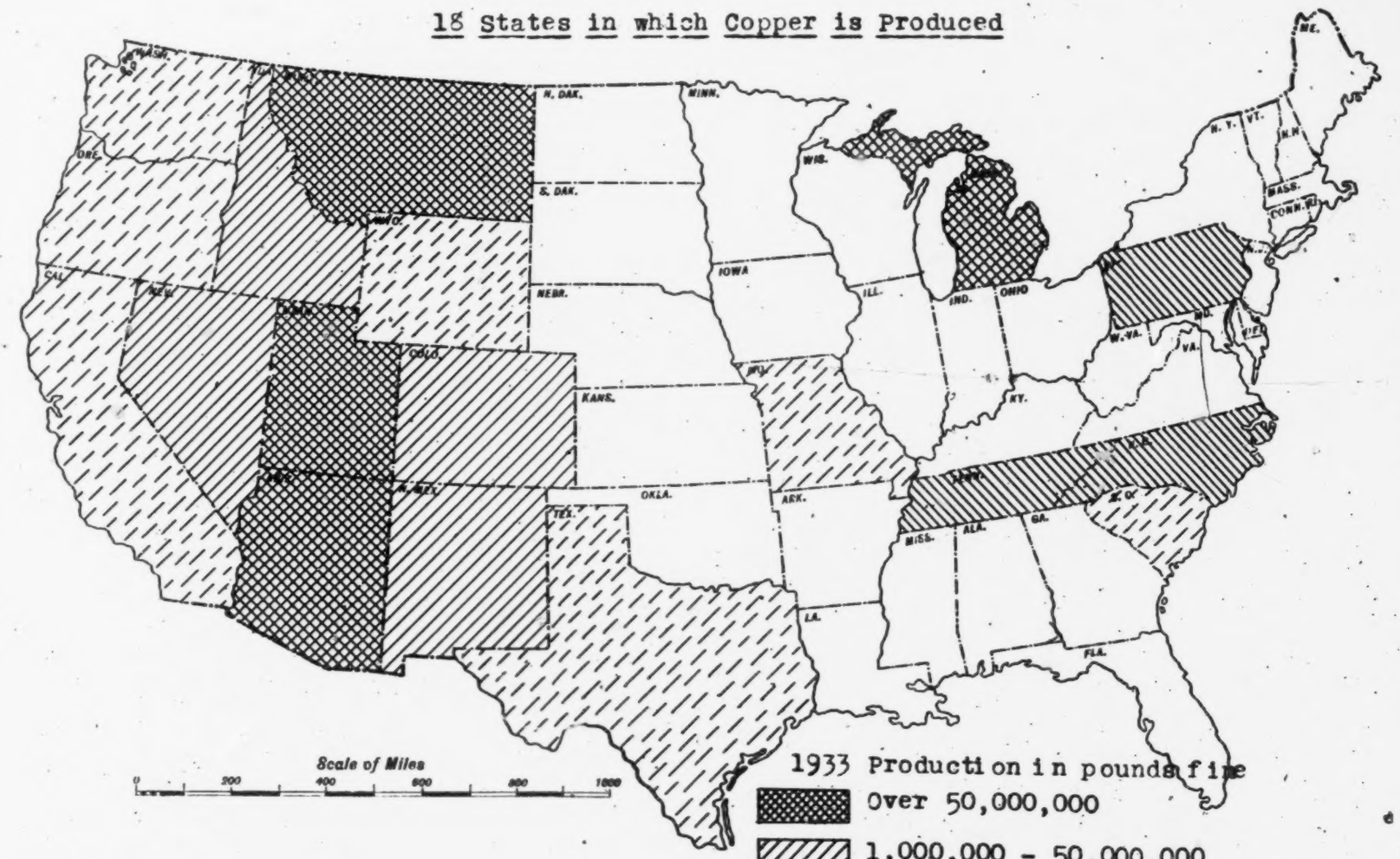


SOURCE: Compiled from Bureau of Mines reports.

MADE BY WESTERN ENGRAVING CO. U. S. A.
FORM 86513

Plaintiff's Ex. 81-I

18 States in which Copper is Produced



Source: Bureau of Mines.

[fol. 1026] PLTFF'S EX. 81-J

Origin of Smelter Production by States of Copper Produced in the United States from Domestic Ores, 1933

(Smelter Output, in Pounds Fine)

Alaska	1,575,936
Arizona	122,697,035
California	632,049
Colorado	8,882,397
Idaho	2,183,284
Michigan	72,340,852
Missouri	181,703
Montana	94,262,751
Nevada	42,507,400
New Mexico	29,948,272
North Carolina	*
Oregon	9,301
Pennsylvania	*
South Carolina	408
Tennessee	*
Texas	2,137
Utah	65,655,914
Vermont	.....
Washington	87,199
Wyoming	46
Undistributed	14,032,559
	449,999,143

* Included under "Undistributed." Bureau of Mines not at liberty to publish figures.

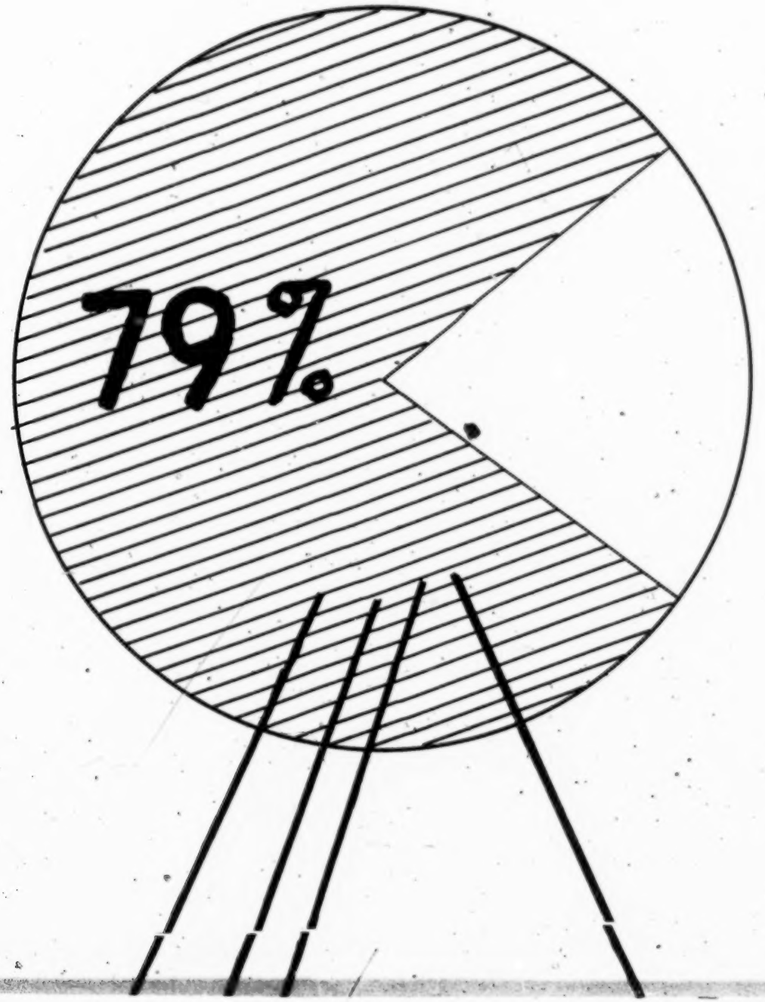
Source: Bureau of Mines.

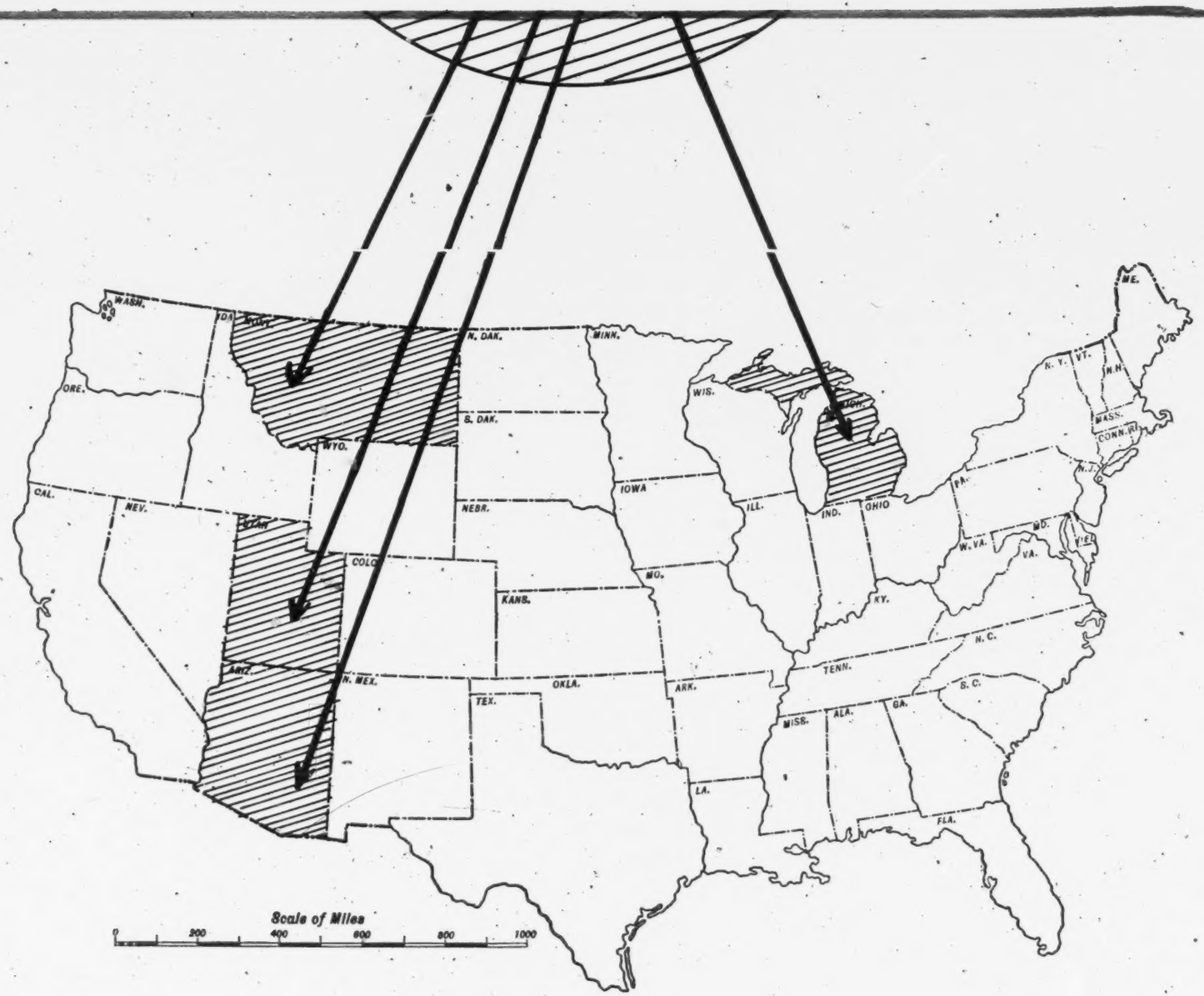
(Here follow 2 maps, Pltff's Exhibits 81-K and 81-L, side folios 1027 and 1028.)

Plaintiff's Ex. 81-K

% OF COPPER PRODUCED

WITHIN 4 STATES



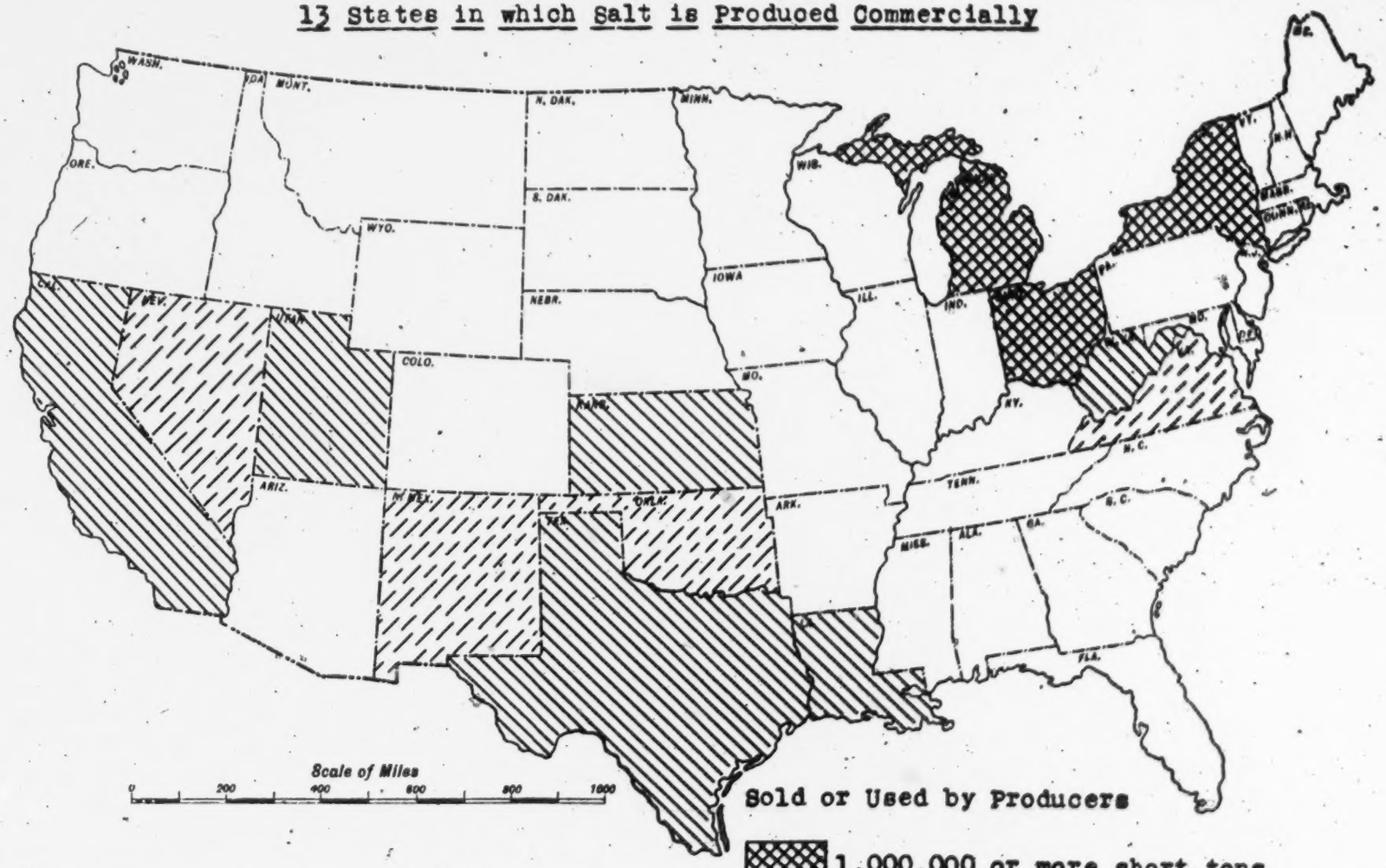


SOURCE: Compiled from Bureau of Mines reports.

MADE BY [illegible] U. S. A.
FORM 96513

Plaintiff's Ex. 81-L

13 States in which Salt is Produced Commercially



Source: Bureau of Mines.

[fol. 1029] PLT'FF'S EX. 81-M

Salt Sold or Used by Producers in the United States, 1933, by States

State	Short tons	Value
California	331,009	$2,018,694
Kansas	732,947	3,039,343
Louisiana	532,569	2,345,208
Michigan	2,090,254	5,679,737
New York	1,847,696	5,120,846
Ohio	1,382,294	2,599,055
Texas	165,603	560,085
Utah	56,305	141,330
West Virginia	63,818	329,051
Undistributed*	402,477	484,737
	7,604,972	$22,318,086

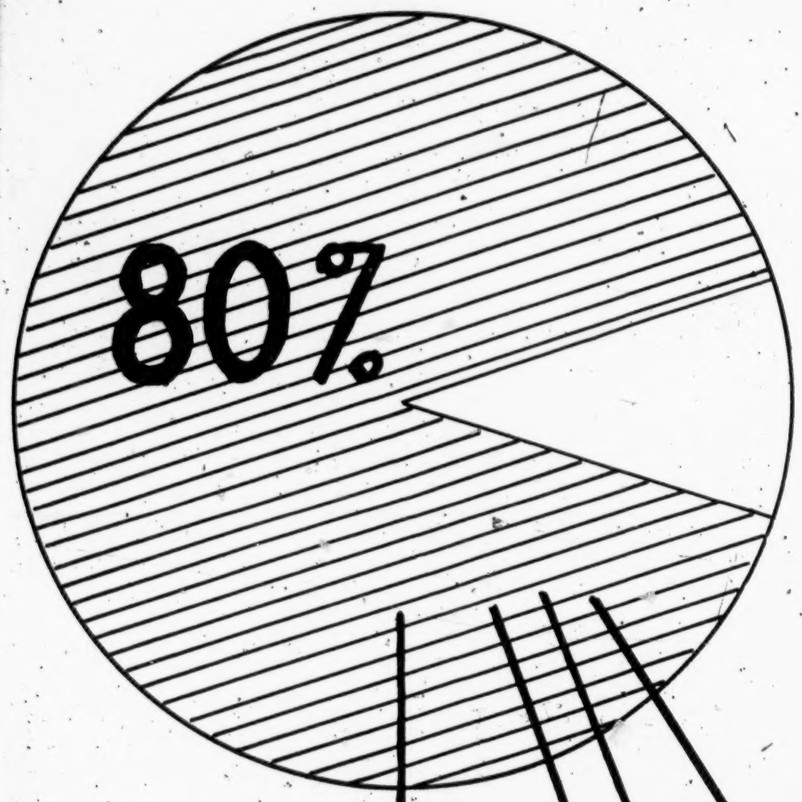
* Nevada, New Mexico, Oklahoma, Puerto Rico and Virginia.

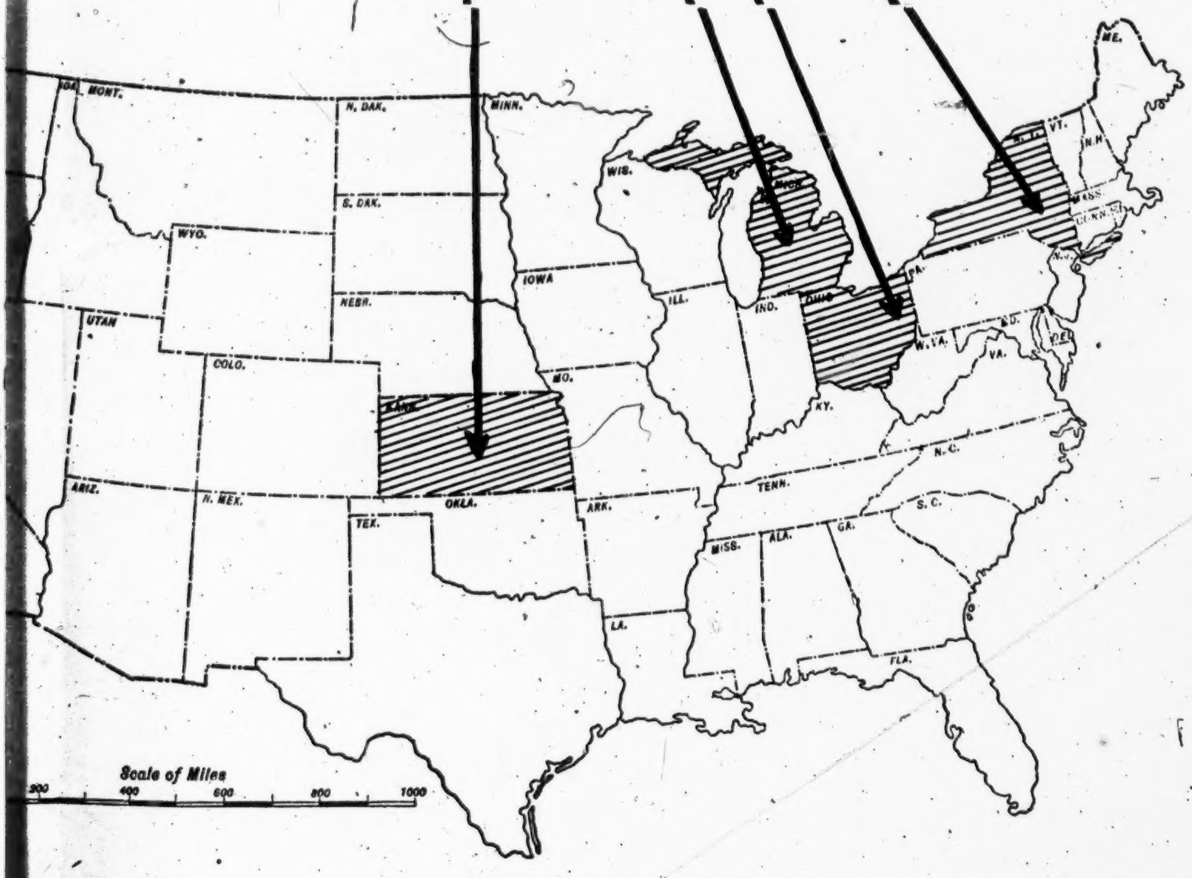
Source: Bureau of Mines.

(Here follow 2 maps, Pltff's Exhibits 81-N and 81-O, side folios 1030 and 1031.)

% OF SALT PRODUCED WITHIN 4 STATES

Plaintiff's Ex. 81-N



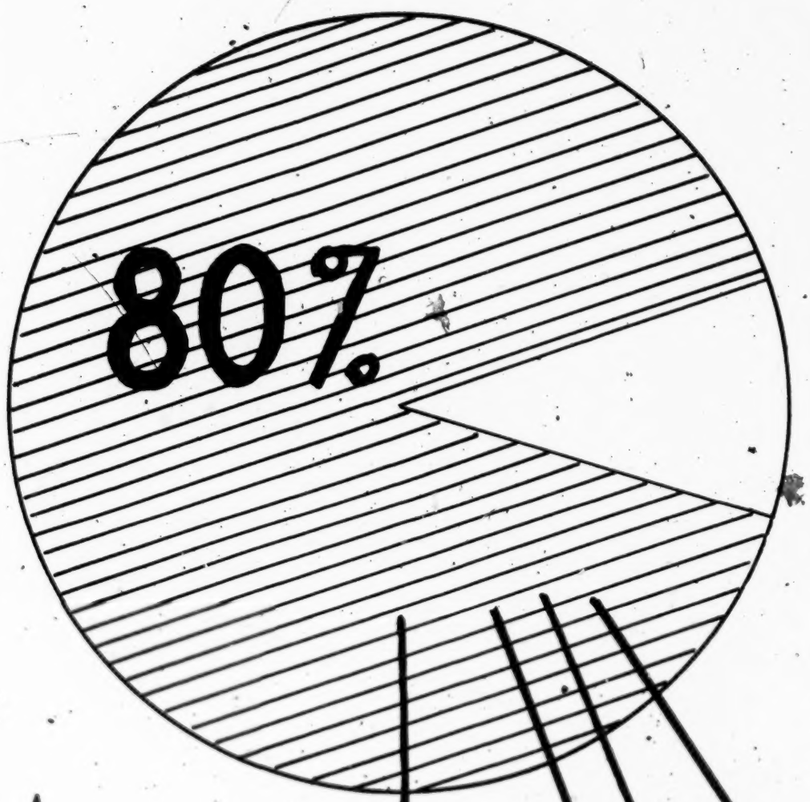


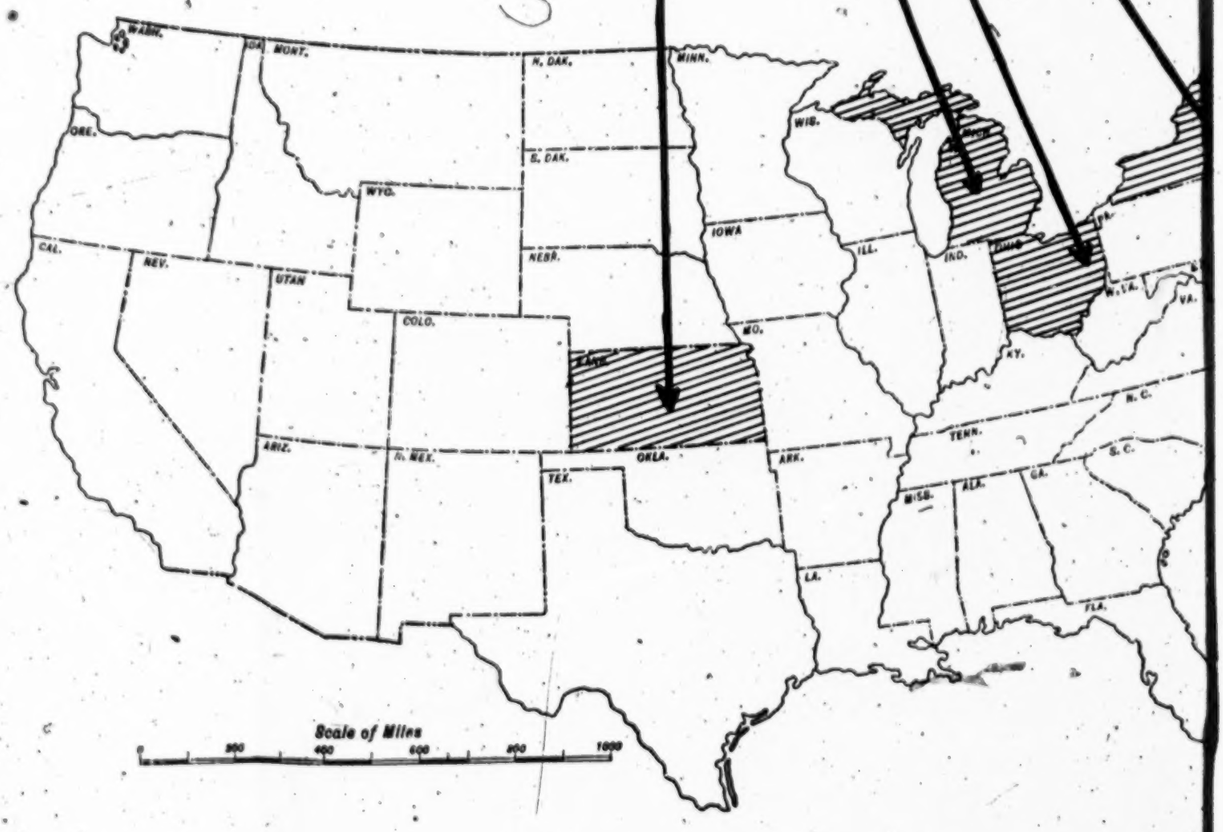
SOURCE: Compiled from Bureau of Mines reports.

9704

Plaintiff

% OF SALT PRODUCED WITHIN 4 STATES



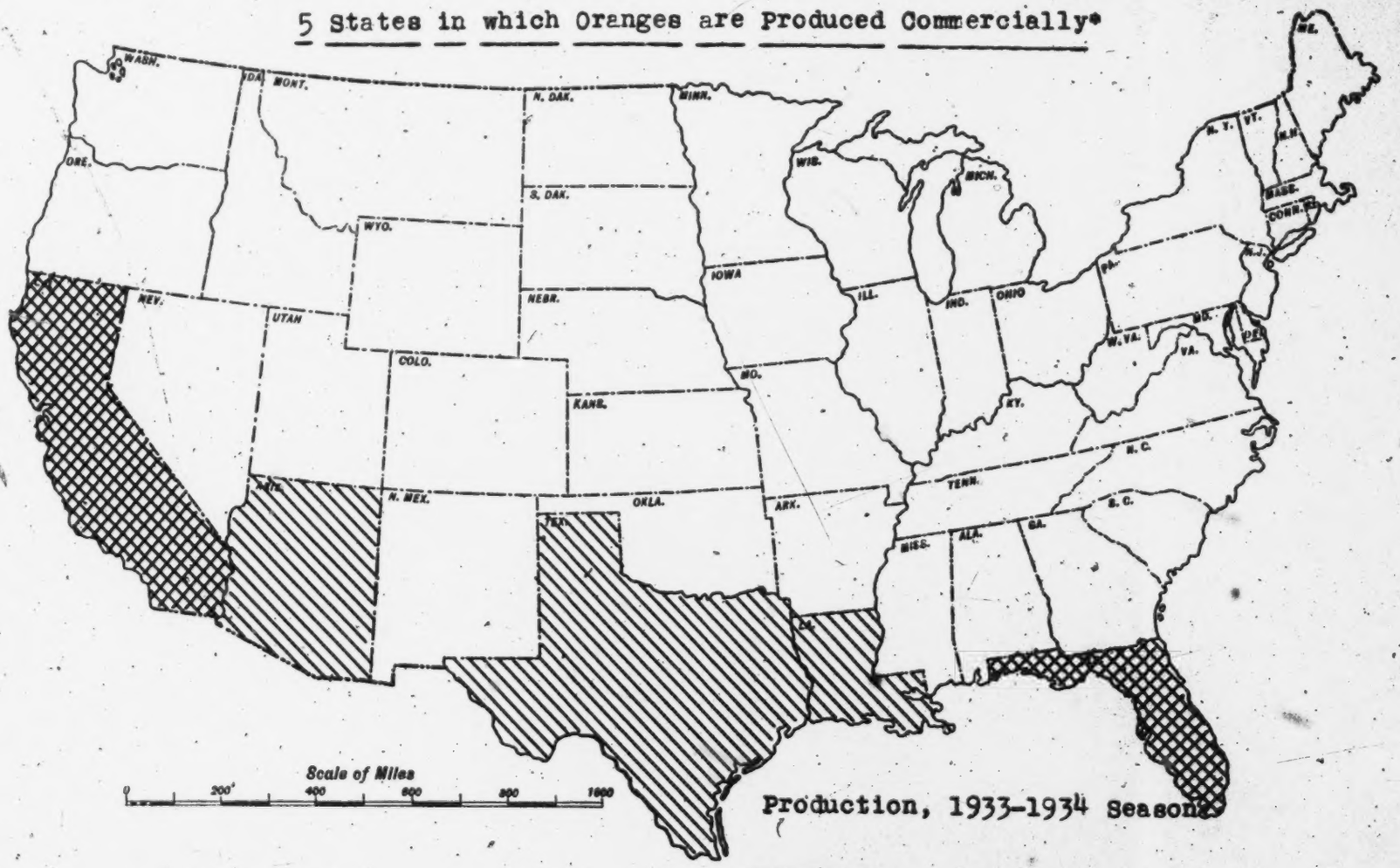


SOURCE: Compiled from Bureau of Mines reports.

MADE BY WESTERN LITHO U. S. A.
FORM 86513

Plaintiff's Ex. 81-0

5 States in which Oranges are Produced Commercially*



Production, 1933-1934 Season

18,000,000 or more boxes

100,000 - 500,000 boxes

Source: Bureau of Agricultural Economics.

* Two states producing 1,000 - 5,000 boxes each are not shown